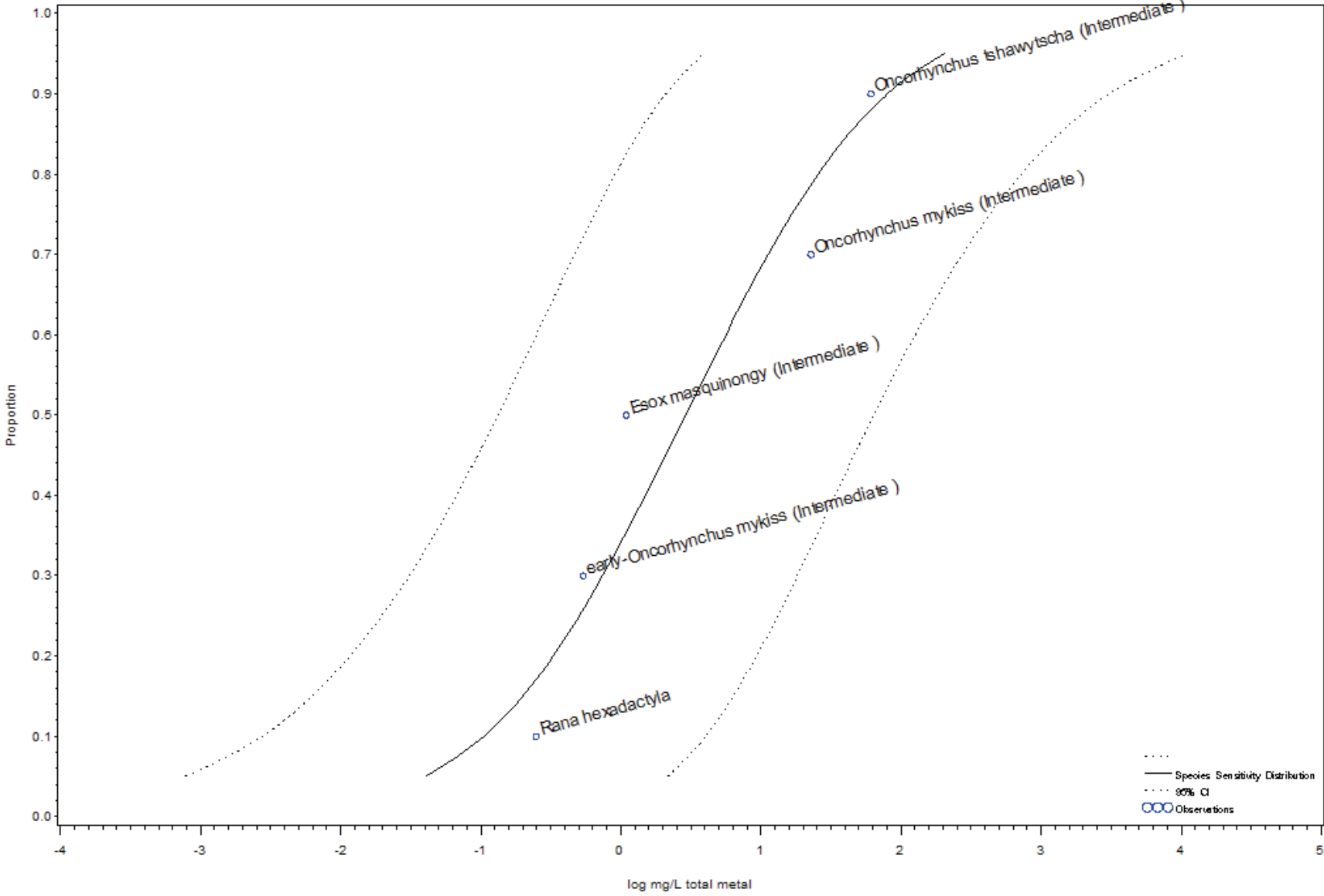


**APPENDIX E**  
**Vertebrate Species Sensitivity Distributions**

# Arsenic SSD for Vertebrates - in water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 7) data for Vertebrate species exposed to arsenic in water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	0.88954	4.58746	0.90833	0.46377	4.40205	3	0.11717

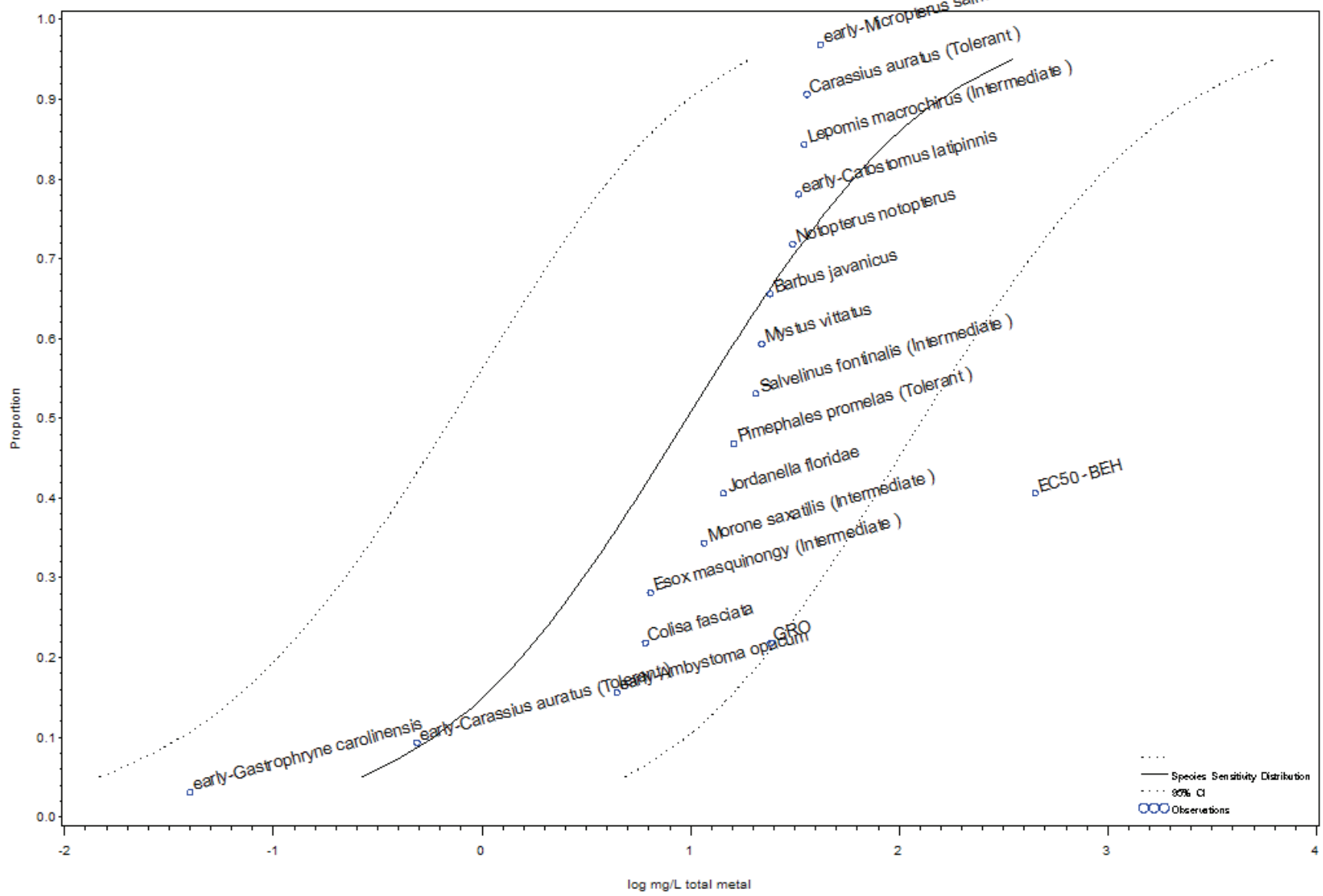
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.041	0.77	0.0022	-1.38534	-0.11210	-2.65859	18.7071
0.10	3.71845	0.105	1.56	0.0071	-0.97693	0.19390	-2.14775	14.7516
0.20	4.15838	0.329	3.89	0.0279	-0.48236	0.59044	-1.55517	11.7405
0.25	4.32551	0.508	5.63	0.0458	-0.29448	0.75015	-1.33911	10.9920
0.30	4.47560	0.749	7.91	0.0708	-0.12575	0.89840	-1.14990	10.4772
0.50	5.00000	2.909	28.56	0.2963	0.46377	1.45581	-0.52826	9.7164
0.75	5.67449	16.673	184.78	1.5045	1.22202	2.26665	0.17739	10.9920
0.90	6.28155	80.254	1189.30	5.4156	1.90447	3.07529	0.73365	14.7516
0.95	6.64485	205.535	3855.91	10.9558	2.31289	3.58613	1.03964	18.7071

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.5	5.00000	Esox masquinongy (Intermediate )	1.1000	0.0414	.	.
0.7	5.52440	Oncorhynchus mykiss (Intermediate )	22.8579	1.3590	0.15544	0.11437
0.7	.	-->BCM	.	1.2528	.	.
0.7	.	-->BEH	.	1.2528	.	.
0.7	.	-->ET50 -BEH	.	11.1844	.	.
0.7	.	-->FDB	.	1.2528	.	.
0.7	.	-->GRO	.	1.2528	.	.
0.7	.	-->MOR	.	0.3952	0.74269	.
0.7	.	-->PHY	.	1.2528	.	.
0.9	6.28155	Oncorhynchus tshawytscha (Intermediate )	61.2598	1.7872	0.48838	0.27327
0.1	3.71845	Rana hexadactyla	0.2490	-0.6038	.	.
0.3	4.47560	early-Oncorhynchus mykiss (Intermediate )	0.5433	-0.2649	0.00460	0.01737

# Arsenic SSD for Vertebrates - in water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 8) data for Vertebrate species exposed to arsenic in water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
16	1.05500	3.96162	0.72412	0.98425	9.61499	14	0.29123

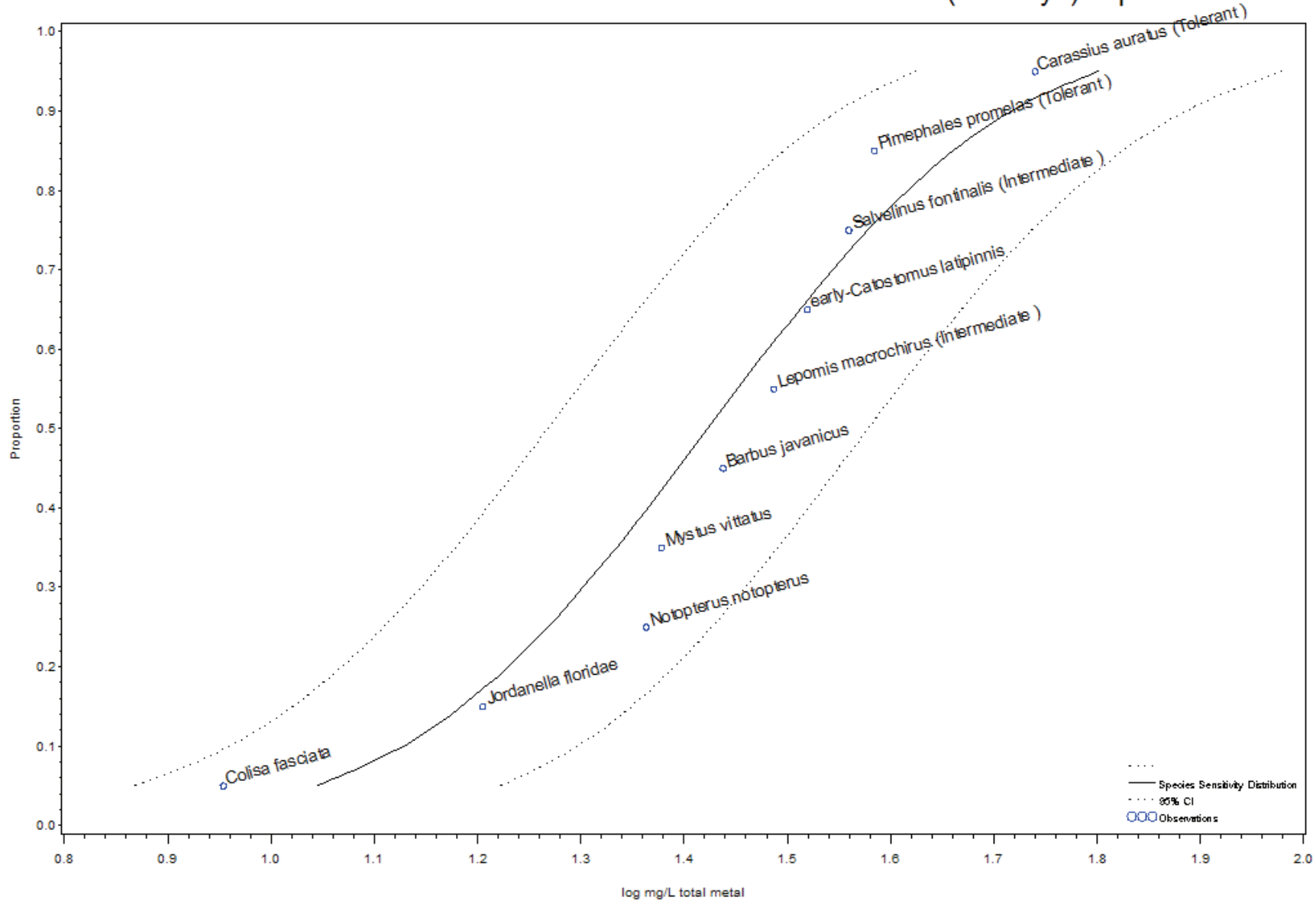
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.266	2.87	0.0247	-0.57486	0.45842	-1.60814	10.7037
0.10	3.71845	0.588	5.79	0.0597	-0.23050	0.76299	-1.22398	9.7497
0.20	4.15838	1.536	13.92	0.1696	0.18650	1.14367	-0.77067	8.9505
0.25	4.32551	2.213	19.59	0.2499	0.34492	1.29199	-0.60216	8.7397
0.30	4.47560	3.070	26.73	0.3526	0.48718	1.42703	-0.45266	8.5916
0.50	5.00000	9.644	81.83	1.1365	0.98425	1.91293	0.05557	8.3677
0.75	5.67449	42.032	372.09	4.7479	1.62357	2.57065	0.67650	8.7397
0.90	6.28155	158.121	1557.68	16.0510	2.19899	3.19248	1.20550	9.7497
0.95	6.64485	349.424	3772.50	32.3651	2.54335	3.57663	1.51008	10.7037

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.65625	5.40225	Barbus javanicus	24.1700	1.38328	.	.
0.90625	6.31801	Carassius auratus (Tolerant )	36.2512	1.55932	0.06579	0.04219
0.21875	4.22358	Colisa fasciata	6.0900	0.78462	.	.
0.28125	4.42087	Esox masquinongy (Intermediate )	6.4498	0.80955	0.55801	0.68929
0.40625	4.76280	Jordanella floridae	14.4000	1.15836	.	.
0.40625	.	-->EC50 -BEH	.	2.65324	0.00000	.
0.84375	6.00999	Lepomis macrochirus (Intermediate )	35.1370	1.54577	0.23253	0.15043
0.34375	4.59775	Morone saxatilis (Intermediate )	11.6646	1.06687	0.28954	0.27140
0.59375	5.23720	Mystus vittatus	22.0000	1.34242	.	.
0.71875	5.57913	Notopterus notopterus	30.9300	1.49038	.	.
0.46875	4.92159	Pimephales promelas (Tolerant )	16.1707	1.20873	0.25858	0.21393
0.46875	.	-->LOEC -BCM	.	2.28202	0.31420	.
0.53125	5.07841	Salvelinus fontinalis (Intermediate )	20.6030	1.31393	0.06790	0.05168
0.15625	3.99001	early-Ambystoma opacum	4.4500	0.64836	.	.
0.09375	3.68199	early-Carassius auratus (Tolerant )	0.4900	-0.30980	.	.
0.78125	5.77642	early-Catostomus latipinnis	33.1000	1.51983	.	.
0.03125	3.13727	early-Gastrophryne carolinensis	0.0400	-1.39794	.	.
0.96875	6.86273	early-Micropterus salmoides (Intermediate )	42.1000	1.62428	.	.

### Arsenic SSD for Vertebrates - in water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 9) data for Vertebrate species exposed to arsenic in water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
10	4.35123	-1.19235	0.92927	1.42313	0.43181	8	0.077783

Predicted Values

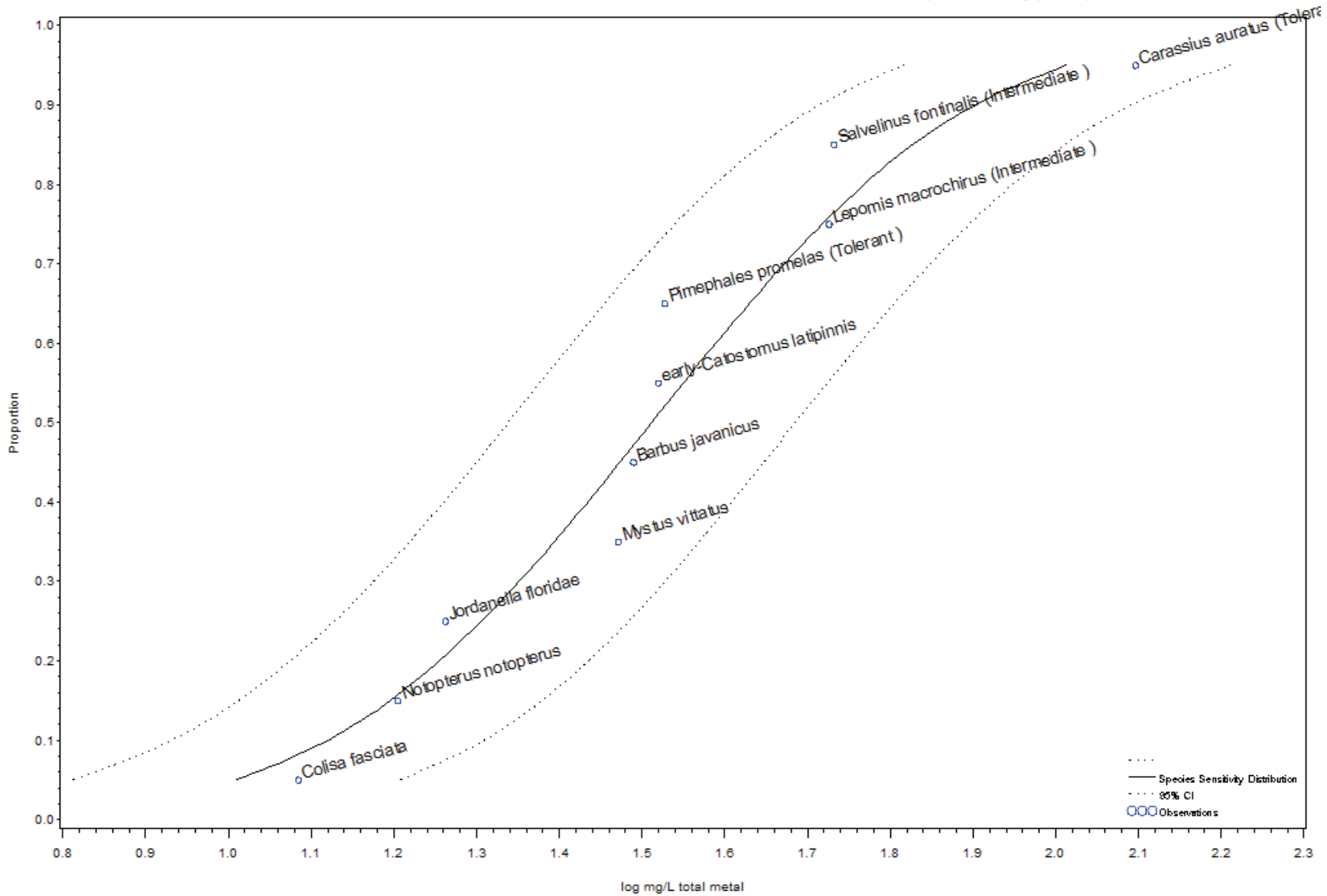
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	11.0944	15.4057	7.9897	1.04511	1.18768	0.90253	0.66845
0.10	3.71845	13.4462	18.3884	9.8323	1.12860	1.26454	0.99266	0.63632
0.20	4.15838	16.9709	22.8845	12.5854	1.22970	1.35954	1.09987	0.60687
0.25	4.32551	18.5402	24.9026	13.8033	1.26811	1.39624	1.13998	0.59866
0.30	4.47560	20.0728	26.8851	14.9866	1.30261	1.42951	1.17570	0.59277
0.50	5.00000	26.4927	35.3291	19.8664	1.42313	1.54813	1.29812	0.58366
0.75	5.67449	37.8562	50.8472	28.1843	1.57814	1.70627	1.45001	0.59866
0.90	6.28155	52.1978	71.3832	38.1688	1.71765	1.85360	1.58171	0.63632
0.95	6.64485	63.2625	87.8462	45.5586	1.80115	1.94372	1.65857	0.66845

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.45	4.87434	Barbus javanicus	27.4195	1.43806	0.02374	0.01651
0.95	6.64485	Carassius auratus (Tolerant )	54.9569	1.74002	0.04254	0.02445
0.05	3.35515	Colisa fasciata	8.9981	0.95415	0.10121	0.10607
0.15	3.96357	Jordanella floridae	16.0493	1.20546	0.00574	0.00476
0.55	5.12566	Lepomis macrochirus (Intermediate )	30.7028	1.48718	0.19734	0.13269
0.35	4.61468	Mystus vittatus	23.9039	1.37847	0.04736	0.03436
0.25	4.32551	Notopterus notopterus	23.0896	1.36342	0.06888	0.05052
0.85	6.03643	Pimephales promelas (Tolerant )	38.4303	1.58467	0.58341	0.36816
0.75	5.67449	Salvelinus fontinalis (Intermediate )	36.3083	1.56001	0.10069	0.06455
0.65	5.38532	early-Catostomus latipinnis	33.1000	1.51983	0.00000	0.00000



# Arsenic SSD for Vertebrates - in water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 10) data for Vertebrate species exposed to arsenic in water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
10	3.27717	0.045800	0.94967	1.51173	0.77795	8	0.055348

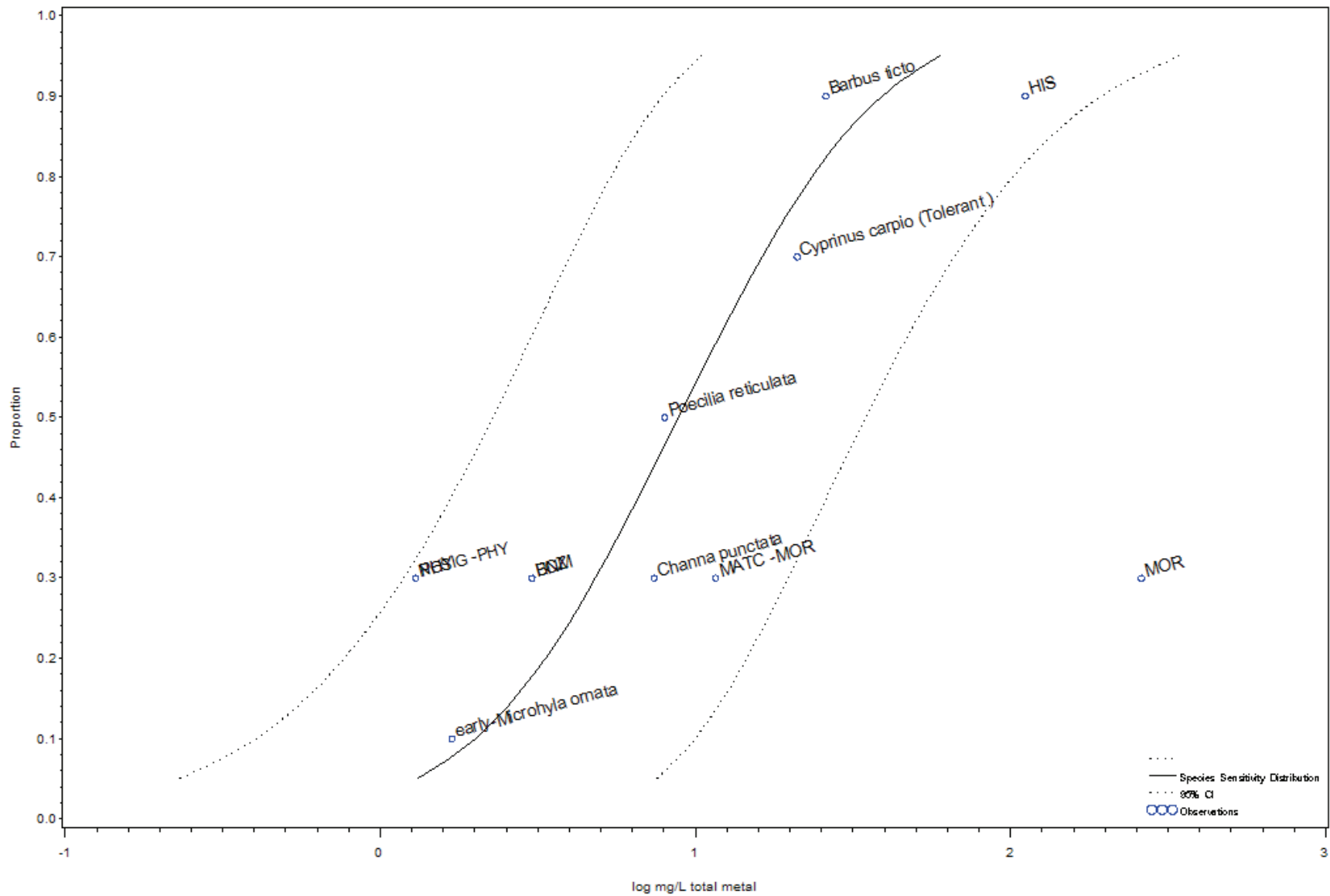
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	10.229	14.761	7.0881	1.00982	1.16911	0.85053	0.75011
0.10	3.71845	13.203	18.736	9.3040	1.12068	1.27268	0.96867	0.71439
0.20	4.15838	17.985	25.132	12.8710	1.25492	1.40022	1.10961	0.68170
0.25	4.32551	20.226	28.142	14.5373	1.30592	1.44935	1.16248	0.67260
0.30	4.47560	22.476	31.175	16.2042	1.35171	1.49380	1.20963	0.66607
0.50	5.00000	32.489	44.848	23.5354	1.51173	1.65174	1.37172	0.65599
0.75	5.67449	52.185	72.607	37.5071	1.71755	1.86098	1.57411	0.67260
0.90	6.28155	79.944	113.446	56.3353	1.90278	2.05479	1.75078	0.71439
0.95	6.64485	103.191	148.913	71.5079	2.01364	2.17293	1.85435	0.75011

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.45	4.87434	Barbus javanicus	30.900	1.48996	.	.
0.95	6.64485	Carassius auratus (Tolerant )	124.955	2.09675	0.19974	0.09526
0.05	3.35515	Colisa fasciata	12.160	1.08493	.	.
0.25	4.32551	Jordanella floridae	18.300	1.26245	.	.
0.75	5.67449	Lepomis macrochirus (Intermediate )	53.287	1.72662	0.19836	0.11489
0.35	4.61468	Mystus vittatus	29.620	1.47159	.	.
0.15	3.96357	Notopterus notopterus	16.030	1.20493	.	.
0.65	5.38532	Pimephales promelas (Tolerant )	33.717	1.52785	0.17235	0.11280
0.85	6.03643	Salvelinus fontinalis (Intermediate )	54.000	1.73239	0.00114	0.00066
0.55	5.12566	early-Catostomus latipinnis	33.100	1.51983	.	.

### Cadmium SSD for Vertebrates - in hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 38) data for Vertebrate species exposed to cadmium in hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.98647	3.11740	0.91133	0.94771	0.88562	3	0.11334

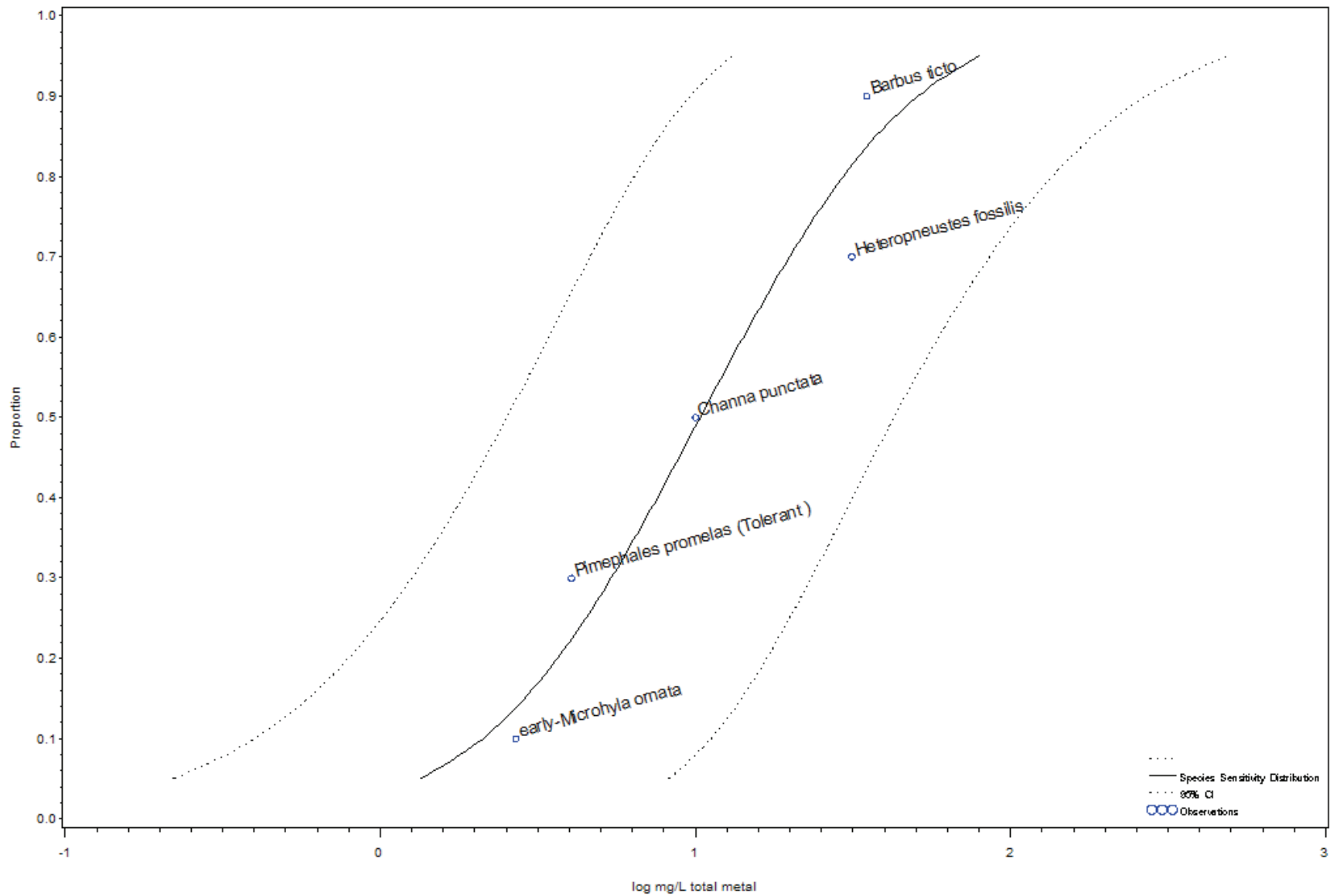
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.3173	4.787	0.3625	0.11969	0.68008	-0.44071	3.35890
0.10	3.71845	2.0071	6.576	0.6126	0.30257	0.81798	-0.21284	2.97130
0.20	4.15838	3.3422	9.918	1.1263	0.52404	0.99640	0.05167	2.63034
0.25	4.32551	4.0567	11.700	1.4066	0.60817	1.06817	0.14817	2.53727
0.30	4.47560	4.8275	13.637	1.7089	0.68373	1.13473	0.23272	2.47093
0.50	5.00000	8.8657	24.245	3.2419	0.94771	1.38462	0.51080	2.36902
0.75	5.67449	19.3755	55.879	6.7183	1.28725	1.74725	0.82726	2.53727
0.90	6.28155	39.1608	128.310	11.9520	1.59285	2.10826	1.07744	2.97130
0.95	6.64485	59.6677	216.837	16.4189	1.77574	2.33613	1.21535	3.35890

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Barbus ticto	26.0000	1.41497	.	.
0.9	.	-->HIS	.	2.04769	.	.
0.3	4.47560	Channa punctata	7.4000	0.86923	.	.
0.3	.	-->BCM	.	0.48243	0.00000	.
0.3	.	-->ENZ	.	0.48243	.	.
0.3	.	-->MATC -MOR	.	1.06471	.	.
0.3	.	-->MOR	.	2.41591	.	.
0.3	.	-->NOSIG -PHY	.	0.11333	.	.
0.3	.	-->PHY	.	0.11333	.	.
0.7	5.52440	Cyprinus carpio (Tolerant )	21.0700	1.32366	.	.
0.7	.	-->ENZ	.	2.99573	.	.
0.7	.	-->HIS	.	2.99573	.	.
0.5	5.00000	Poecilia reticulata	7.9896	0.90252	0.43975	0.48725
0.1	3.71845	early-Microhyla ornata	1.6911	0.22817	0.04173	0.18291

# Cadmium SSD for Vertebrates - in hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 39) data for Vertebrate species exposed to cadmium in hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.85652	3.11351	0.91637	1.01614	1.01954	3	0.10691

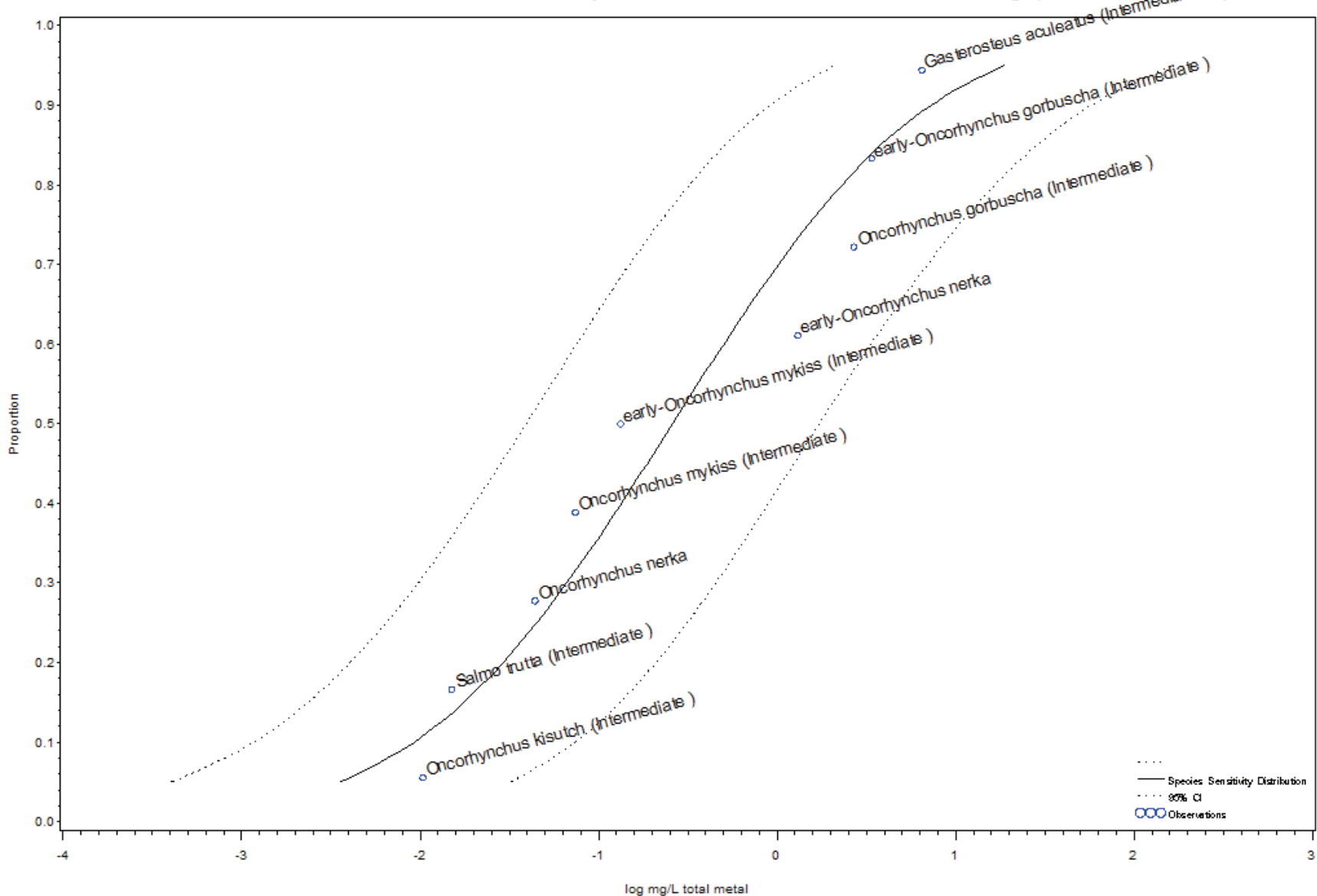
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.3494	5.151	0.3535	0.13016	0.71188	-0.45157	3.55500
0.10	3.71845	2.1176	7.262	0.6175	0.32585	0.86103	-0.20934	3.13755
0.20	4.15838	3.6543	11.311	1.1807	0.56281	1.05349	0.07213	2.77204
0.25	4.32551	4.4961	13.512	1.4960	0.65283	1.13072	0.17494	2.67257
0.30	4.47560	5.4160	15.932	1.8411	0.73368	1.20227	0.26508	2.60174
0.50	5.00000	10.3787	29.524	3.6485	1.01614	1.47017	0.56212	2.49309
0.75	5.67449	23.9580	72.001	7.9719	1.37945	1.85734	0.90156	2.67257
0.90	6.28155	50.8675	174.433	14.8338	1.70644	2.24163	1.17125	3.13755
0.95	6.64485	79.8233	304.685	20.9127	1.90213	2.48385	1.32041	3.55500

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Barbus ticto	35.0000	1.54407	.	.
0.5	5.00000	Channa punctata	10.0200	1.00087	.	.
0.7	5.52440	Heteropneustes fossilis	31.4167	1.49716	0.24687	0.16490
0.3	4.47560	Pimephales promelas (Tolerant )	4.0499	0.60744	0.44317	0.72957
0.1	3.71845	early-Microhyla ornata	2.6988	0.43117	0.01820	0.04222

# Cadmium SSD for Vertebrates - in moderately hard water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 40) data for Vertebrate species exposed to cadmium in moderately hard water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	0.88609	5.51882	0.92373	-0.58551	9.17977	7	0.085019

Predicted Values

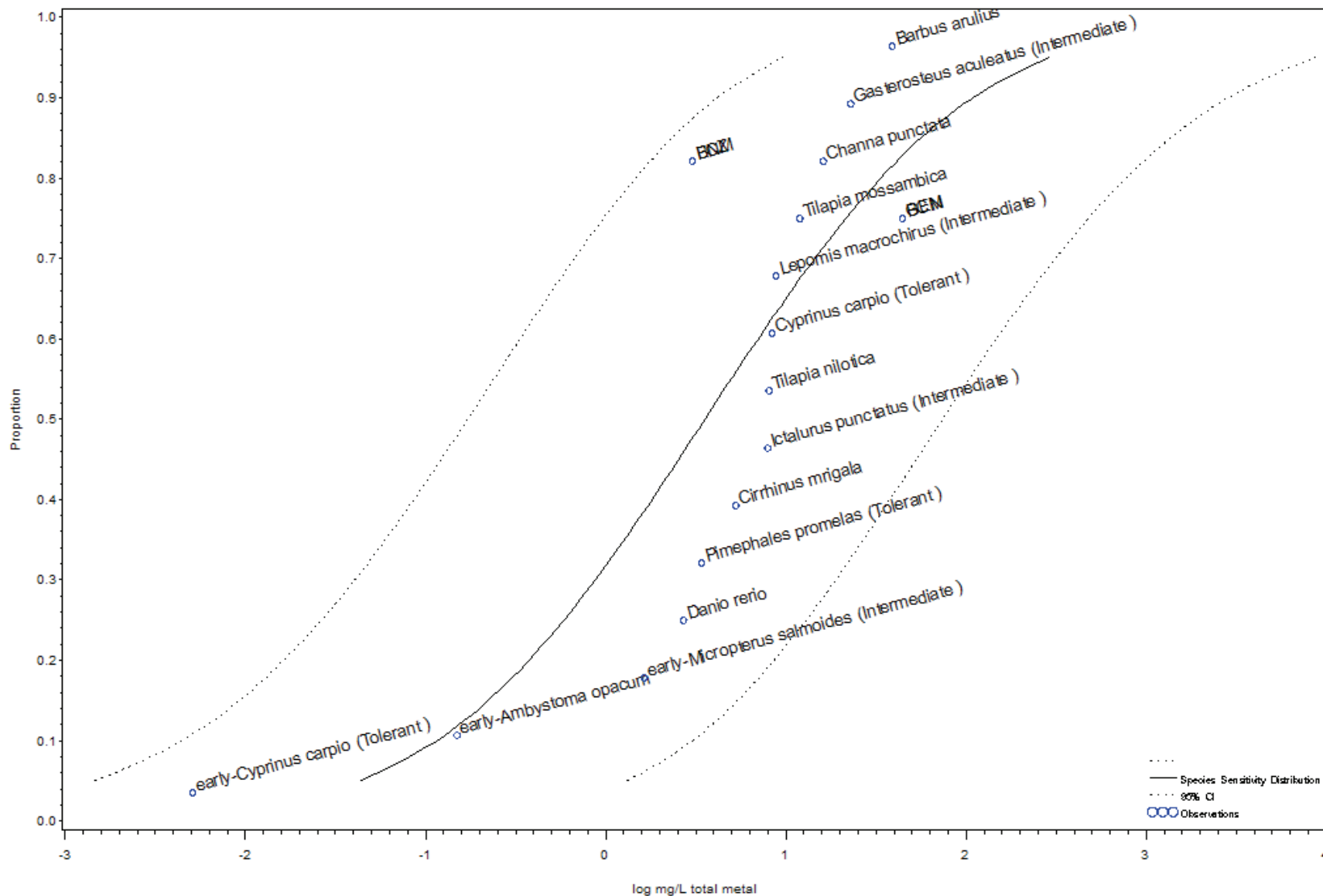
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0036	0.021	0.00063	-2.44181	-1.68171	-3.20192	5.58200
0.10	3.71845	0.0093	0.049	0.00177	-2.03181	-1.31041	-2.75321	5.07512
0.20	4.15838	0.0292	0.141	0.00601	-1.53533	-0.84972	-2.22093	4.64221
0.25	4.32551	0.0450	0.213	0.00950	-1.34671	-0.67114	-2.02227	4.52660
0.30	4.47560	0.0665	0.310	0.01427	-1.17733	-0.50898	-1.84567	4.44495
0.50	5.00000	0.2597	1.179	0.05719	-0.58551	0.07165	-1.24267	4.32085
0.75	5.67449	1.4986	7.100	0.31631	0.17568	0.85125	-0.49988	4.52660
0.90	6.28155	7.2574	38.211	1.37842	0.86078	1.58219	0.13938	5.07512
0.95	6.64485	18.6547	107.372	3.24107	1.27079	2.03089	0.51069	5.58200



Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.94444	6.59322	Gasterosteus aculeatus (Intermediate )	6.50000	0.81291	.	.
0.72222	5.58946	Oncorhynchus gorbuscha (Intermediate )	2.70000	0.43136	.	.
0.05556	3.40678	Oncorhynchus kisutch (Intermediate )	0.01040	-1.98297	.	.
0.05556	.	-->ENZ	.	-4.62558	0.28671	.
0.05556	.	-->HRM	.	-4.88422	.	.
0.05556	.	-->MOR	.	-4.66705	.	.
0.05556	.	-->NoTrend -HIS	.	-4.54032	.	.
0.05556	.	-->NoTrend -MOR	.	-5.41261	.	.
0.38889	4.71778	Oncorhynchus mykiss (Intermediate )	0.07439	-1.12846	1.02964	0.91243
0.38889	.	-->NOSIG -BEH	.	-5.89615	.	.
0.27778	4.41054	Oncorhynchus nerka	0.04421	-1.35450	0.83937	0.61969
0.16667	4.03258	Salmo trutta (Intermediate )	0.01510	-1.82102	.	.
0.83333	5.96742	early-Oncorhynchus gorbuscha (Intermediate )	3.39617	0.53099	0.04427	0.08337
0.50000	5.00000	early-Oncorhynchus mykiss (Intermediate )	0.13325	-0.87533	0.01858	0.02123
0.50000	.	-->BCM	.	-0.55009	0.34824	.
0.50000	.	-->DVP	.	-4.26870	.	.
0.50000	.	-->GRO	.	-2.42415	1.70137	.
0.50000	.	-->HRM	.	-0.51083	0.00000	.
0.50000	.	-->MOR	.	-3.17809	1.54236	.
0.50000	.	-->NOSIG -BCM	.	-0.91629	.	.
0.50000	.	-->NOSIG -HIS	.	-0.22314	.	.
0.50000	.	-->NOSIG -HRM	.	-0.51083	.	.
0.50000	.	-->NR-LETH -MOR	.	0.48042	2.93110	.
0.61111	5.28222	early-Oncorhynchus nerka	1.31037	0.11739	0.48783	4.15551

# Cadmium SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 41) data for Vertebrate species exposed to cadmium in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
14	0.86163	4.52541	0.76237	0.55081	13.1278	12	0.25315

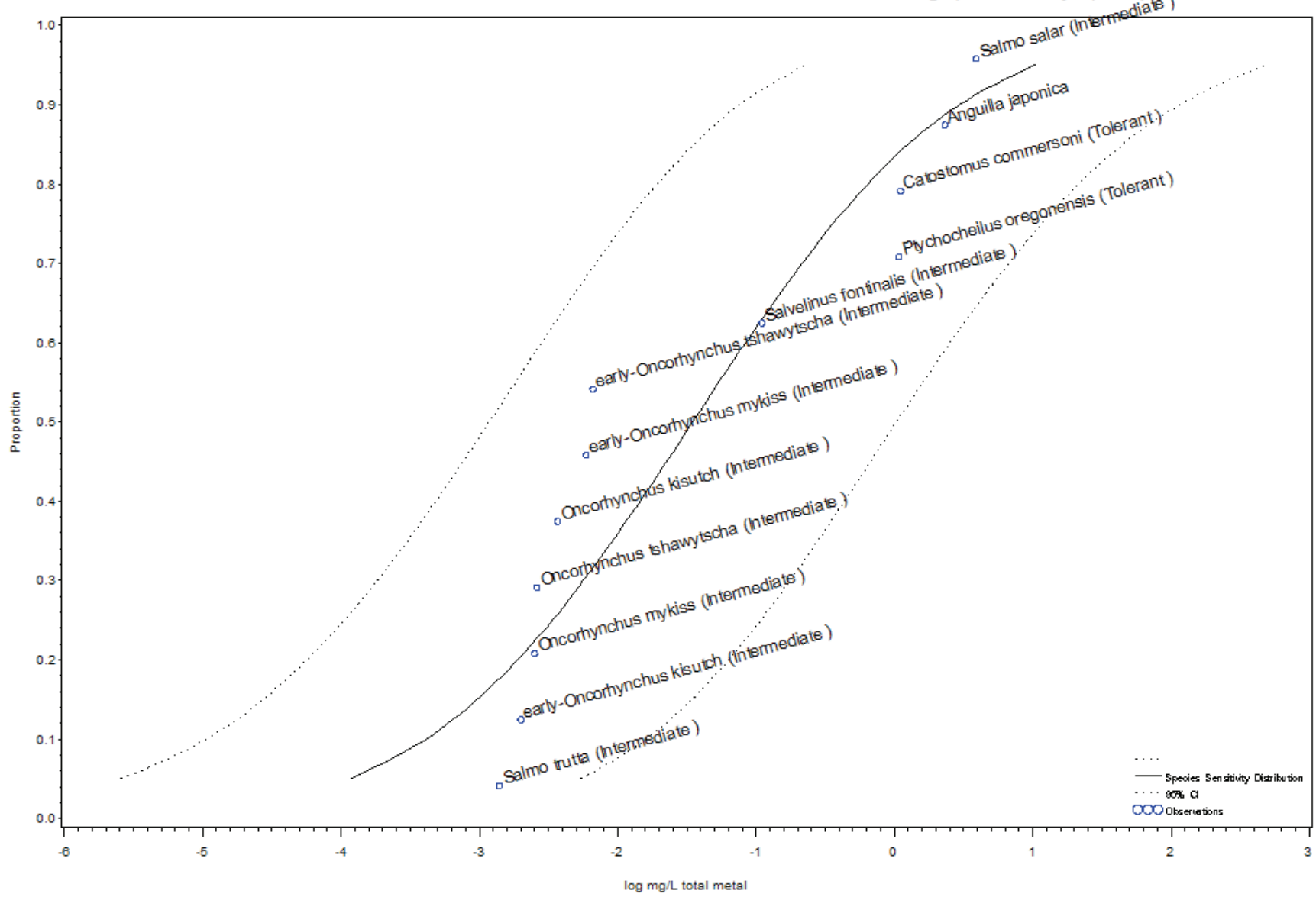
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.044	0.71	0.0027	-1.35820	-0.14939	-2.56701	16.1118
0.10	3.71845	0.116	1.67	0.0080	-0.93656	0.22235	-2.09546	14.3486
0.20	4.15838	0.375	4.87	0.0289	-0.42597	0.68724	-1.53919	12.9012
0.25	4.32551	0.586	7.39	0.0465	-0.23200	0.86849	-1.33250	12.5243
0.30	4.47560	0.875	10.80	0.0709	-0.05781	1.03356	-1.14918	12.2606
0.50	5.00000	3.555	42.47	0.2975	0.55081	1.62808	-0.52647	11.8638
0.75	5.67449	21.558	271.71	1.7105	1.33362	2.43411	0.23312	12.5243
0.90	6.28155	109.186	1574.24	7.5729	2.03817	3.19707	0.87926	14.3486
0.95	6.64485	288.280	4662.54	17.8240	2.45981	3.66862	1.25101	16.1118

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.96429	6.80274	Barbus arulius	39.0000	1.59106	.	.
0.82143	5.92082	Channa punctata	16.2000	1.20952	.	.
0.82143	.	-->BCM	.	0.48243	.	.
0.82143	.	-->ENZ	.	0.48243	.	.
0.39286	4.72812	Cirrhinus mrigala	5.3000	0.72428	.	.
0.60714	5.27188	Cyprinus carpio (Tolerant )	8.4201	0.92532	0.30082	0.32510
0.60714	.	-->BCM	.	-0.03881	1.22502	.
0.60714	.	-->ENZ	.	0.61612	0.70581	.
0.60714	.	-->MOR	.	2.07002	.	.
0.60714	.	-->PHY	.	0.54378	0.98231	.
0.25000	4.32551	Danio rerio	2.7194	0.43447	0.28853	0.66409
0.89286	6.24187	Gasterosteus aculeatus (Intermediate )	23.0000	1.36173	.	.
0.89286	.	-->MOR	.	-0.51919	.	.
0.46429	4.91036	Ictalurus punctatus (Intermediate )	7.9400	0.89982	.	.
0.67857	5.46371	Lepomis macrochirus (Intermediate )	8.8100	0.94498	.	.
0.67857	.	-->BEH	.	-2.30259	.	.
0.67857	.	-->MOR	.	-0.69315	.	.
0.32143	4.53629	Pimephales promelas (Tolerant )	3.4300	0.53529	0.05230	0.09770
0.32143	.	-->GRO	.	-4.96556	0.23772	.
0.32143	.	-->NOSIG -GRO	.	-5.24005	.	.
0.75000	5.67449	Tilapia mossambica	12.0000	1.07918	.	.
0.75000	.	-->BCM	.	1.64866	.	.
0.75000	.	-->GEN	.	1.64866	.	.
0.53571	5.08964	Tilapia nilotica	8.0750	0.90714	.	.
0.10714	3.75813	early-Ambystoma opacum	0.1500	-0.82391	.	.
0.03571	3.19726	early-Cyprinus carpio (Tolerant )	0.0051	-2.29243	.	.
0.17857	4.07918	early-Micropterus salmoides (Intermediate )	1.6400	0.21484	.	.

### Cadmium SSD for Vertebrates - in soft water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 42) data for Vertebrate species exposed to cadmium in soft water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	0.66487	5.96902	0.83510	-1.45744	20.3836	10	0.17793

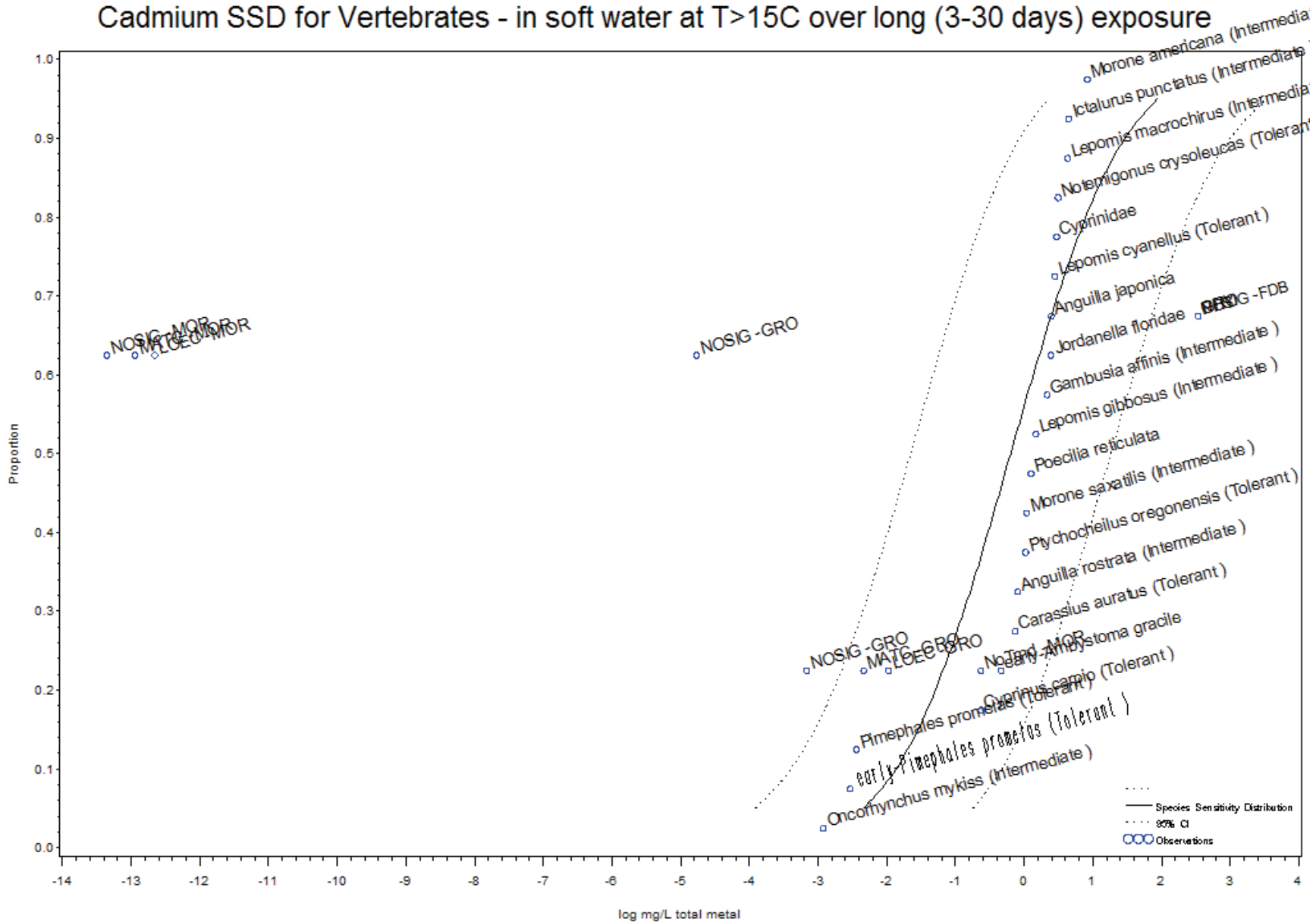
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0001	0.003	0.00001	-3.93138	-2.57881	-5.28395	22.4757
0.10	3.71845	0.0004	0.008	0.00002	-3.38496	-2.09134	-4.67857	19.6105
0.20	4.15838	0.0019	0.033	0.00011	-2.72328	-1.48377	-3.96279	17.3006
0.25	4.32551	0.0034	0.057	0.00020	-2.47191	-1.24749	-3.69632	16.7058
0.30	4.47560	0.0057	0.093	0.00035	-2.24617	-1.03258	-3.45975	16.2913
0.50	5.00000	0.0349	0.549	0.00222	-1.45744	-0.26060	-2.65429	15.6706
0.75	5.67449	0.3606	6.046	0.02151	-0.44298	0.78143	-1.66740	16.7058
0.90	6.28155	2.9517	58.034	0.15013	0.47007	1.76368	-0.82355	19.6105
0.95	6.64485	10.3870	233.917	0.46123	1.01649	2.36906	-0.33608	22.4757

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.87500	6.15035	Anguilla japonica	2.32000	0.36549	.	.
0.79167	5.81222	Catostomus commersoni (Tolerant )	1.11000	0.04532	.	.
0.37500	4.68136	Oncorhynchus kisutch (Intermediate )	0.00370	-2.43180	.	.
0.20833	4.18778	Oncorhynchus mykiss (Intermediate )	0.00252	-2.59857	0.27319	0.10513
0.20833	.	-->BCM	.	-7.33854	.	.
0.20833	.	-->GRO	.	-7.33854	.	.
0.20833	.	-->NOEC -MOR	.	-6.56621	0.34823	.
0.20833	.	-->NoTrend -MOR	.	-7.33854	.	.
0.29167	4.45148	Oncorhynchus tshawytscha (Intermediate )	0.00261	-2.58269	0.10757	0.04165
0.70833	5.54852	Ptychocheilus oregonensis (Tolerant )	1.08280	0.03455	0.01191	0.34478
0.95833	6.73166	Salmo salar (Intermediate )	3.91918	0.59320	0.12452	0.20991
0.95833	.	-->LT50 -MOR	.	-4.39450	2.57402	.
0.95833	.	-->MOR	.	-5.77895	2.98006	.
0.04167	3.26834	Salmo trutta (Intermediate )	0.00140	-2.85387	.	.
0.62500	5.31864	Salvelinus fontinalis (Intermediate )	0.11042	-0.95696	2.35159	2.45735
0.62500	.	-->BCM	.	-5.05930	.	.
0.62500	.	-->IC50 -MOR	.	-3.23799	1.45765	.
0.62500	.	-->LOEC -MOR	.	-3.02117	1.40886	.
0.62500	.	-->MATC -MOR	.	-3.40987	1.43257	.
0.62500	.	-->MOR	.	-0.86883	0.90670	.
0.62500	.	-->NOSIG -GRO	.	-3.02117	1.40886	.
0.62500	.	-->NOSIG -MOR	.	-3.80447	1.44794	.
0.62500	.	-->NR-LETH -MOR	.	-6.31997	.	.
0.12500	3.84965	early-Oncorhynchus kisutch (Intermediate )	0.00200	-2.69897	.	.
0.12500	.	-->POP	.	-6.16469	0.67982	.
0.45833	4.89537	early-Oncorhynchus mykiss (Intermediate )	0.00592	-2.22735	0.76061	0.34149
0.45833	.	-->NOEC -MOR	.	-5.24953	.	.
0.54167	5.10463	early-Oncorhynchus tshawytscha (Intermediate )	0.00664	-2.17767	0.68464	0.31439

# Cadmium SSD for Vertebrates - in soft water at T>15C over long (3-30 days) exposure





Species Sensitivity Distribution (SSD 43) data for Vertebrate species exposed to cadmium in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
20	0.76976	5.15048	0.74007	-0.19549	23.4453	18	0.27107

Predicted Values

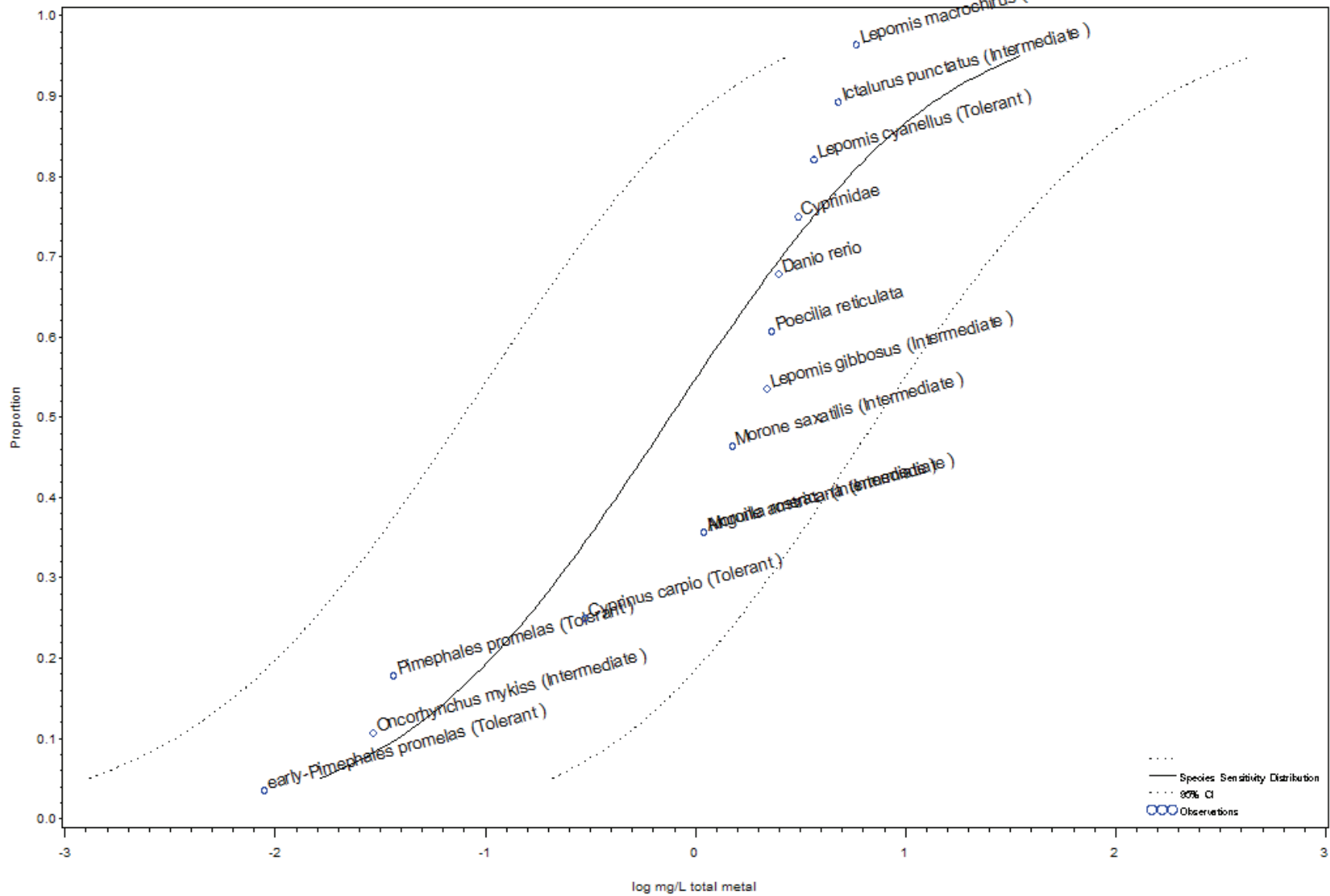
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0047	0.09	0.00023	-2.33234	-1.02377	-3.64091	20.3010
0.10	3.71845	0.0138	0.26	0.00074	-1.86037	-0.59267	-3.12807	18.4686
0.20	4.15838	0.0514	0.87	0.00302	-1.28885	-0.05817	-2.51953	16.9502
0.25	4.32551	0.0848	1.41	0.00510	-1.07173	0.14872	-2.29217	16.5526
0.30	4.47560	0.1328	2.17	0.00813	-0.87674	0.33638	-2.08986	16.2738
0.50	5.00000	0.6375	10.15	0.04006	-0.19549	1.00636	-1.39733	15.8536
0.75	5.67449	4.7946	79.65	0.28861	0.68075	1.90120	-0.53969	16.5526
0.90	6.28155	29.4710	545.88	1.59109	1.46940	2.73710	0.20169	18.4686
0.95	6.64485	87.3708	1778.01	4.29338	1.94137	3.24993	0.63280	20.3010

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.675	5.45376	Anguilla japonica	2.51666	0.4008	0.24822	0.61927
0.675	.	-->GRO	.	2.5377	.	.
0.675	.	-->NOSIG -FDB	.	2.5377	.	.
0.675	.	-->PHY	.	2.5377	.	.
0.325	4.54624	Anguilla rostrata (Intermediate )	0.82000	-0.0862	.	.
0.275	4.40224	Carassius auratus (Tolerant )	0.74800	-0.1261	.	.
0.775	5.75542	Cyprinidae	3.00000	0.4771	.	.
0.175	4.06541	Cyprinus carpio (Tolerant )	0.24000	-0.6198	.	.
0.575	5.18912	Gambusia affinis (Intermediate )	2.20000	0.3424	.	.
0.925	6.43953	Ictalurus punctatus (Intermediate )	4.48000	0.6513	.	.
0.925	.	-->NOSIG -GEN	.	-2.9004	.	.
0.625	5.31864	Jordanella floridae	2.50000	0.3979	0.00000	0.00000
0.625	.	-->LOEC -MOR	.	-12.6524	.	.
0.625	.	-->MATC -MOR	.	-12.9400	.	.

0.625	.	-->NOSIG -GRO	.	-4.7677	.	.
0.625	.	-->NOSIG -MOR	.	-13.3455	.	.
0.725	5.59776	Lepomis cyanellus (Tolerant )	2.84000	0.4533	.	.
0.525	5.06271	Lepomis gibbosus (Intermediate )	1.50000	0.1761	.	.
0.875	6.15035	Lepomis macrochirus (Intermediate )	4.36370	0.6399	0.30493	0.47656
0.875	.	-->NOEC -MOR	.	1.4351	.	.
0.975	6.95996	Morone americana (Intermediate )	8.40000	0.9243	.	.
0.425	4.81088	Morone saxatilis (Intermediate )	1.10000	0.0414	.	.
0.825	5.93459	Notemigonus crysoleucas (Tolerant )	3.15000	0.4983	.	.
0.025	3.04004	Oncorhynchus mykiss (Intermediate )	0.00121	-2.9175	0.44293	0.15182
0.025	.	-->NR-LETH -MOR	.	-4.2475	.	.
0.025	.	-->NoTrend -MOR	.	-6.5857	.	.
0.125	3.84965	Pimephales promelas (Tolerant )	0.00365	-2.4381	1.02603	0.42084
0.125	.	-->GRO	.	-6.3771	0.00000	.
0.125	.	-->LETC -MOR	.	-6.4700	0.36121	.
0.125	.	-->LOEC -GRO	.	-5.8430	0.00000	.
0.125	.	-->NOSIG -GRO	.	-6.3200	0.00000	.
0.475	4.93729	Poecilia reticulata	1.27000	0.1038	.	.
0.375	4.68136	Ptychocheilus oregonensis (Tolerant )	1.06671	0.0280	0.01439	0.51321
0.225	4.24458	early-Ambystoma gracile	0.46840	-0.3294	.	.
0.225	.	-->LOEC -GRO	.	-1.9702	0.76379	.
0.225	.	-->MATC -GRO	.	-2.3310	.	.
0.225	.	-->NOSIG -GRO	.	-3.1589	0.87938	.
0.225	.	-->NoTrend -MOR	.	-0.6253	.	.
0.075	3.56047	early-Pimephales promelas (Tolerant )	0.00297	-2.5274	0.22883	0.09054
0.075	.	-->LOEC -GRO	.	-6.0119	0.28671	.
0.075	.	-->LOEC -MOR	.	-5.4626	0.49013	.
0.075	.	-->LOEC -REP	.	-6.2146	.	.
0.075	.	-->NOSIG -GRO	.	-6.0119	0.28671	.
0.075	.	-->NOSIG -MOR	.	-5.8680	0.49013	.
0.075	.	-->NOSIG -REP	.	-6.9078	.	.
0.075	.	-->NR-LETH -MOR	.	-5.0809	0.45915	.

### Cadmium SSD for Vertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 44) data for Vertebrate species exposed to cadmium in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
14	0.98875	5.11839	0.82312	-0.11949	10.7459	12	0.18812

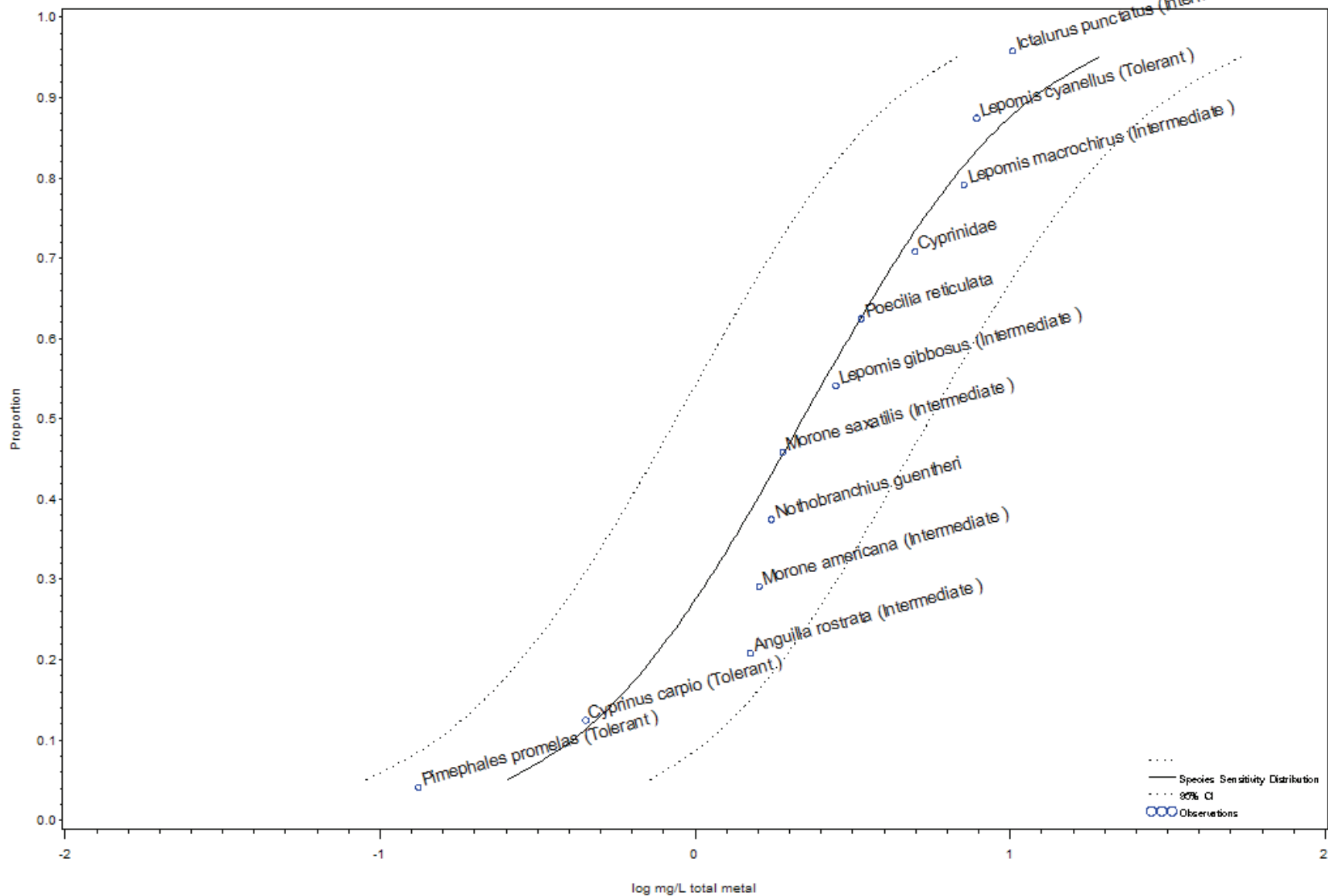
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0165	0.131	0.00207	-1.78330	-0.88198	-2.68462	7.84200
0.10	3.71845	0.0384	0.282	0.00522	-1.41587	-0.54955	-2.28219	7.21453
0.20	4.15838	0.1069	0.730	0.01566	-0.97093	-0.13657	-1.80529	6.68258
0.25	4.32551	0.1578	1.056	0.02358	-0.80190	0.02357	-1.62737	6.54126
0.30	4.47560	0.2238	1.476	0.03395	-0.65010	0.16900	-1.46921	6.44165
0.50	5.00000	0.7590	4.893	0.11776	-0.11974	0.68953	-0.92900	6.29054
0.75	5.67449	3.6511	24.427	0.54573	0.56243	1.38788	-0.26302	6.54090
0.90	6.28155	15.0105	110.325	2.04228	1.17640	2.04268	0.31012	7.21382
0.95	6.64485	34.9809	278.678	4.39096	1.54383	2.44510	0.64256	7.84104

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.35714	4.63389	Anguilla rostrata (Intermediate )	1.10000	0.04139	.	.
0.75000	5.67449	Cyprinidae	3.10000	0.49136	.	.
0.25000	4.32551	Cyprinus carpio (Tolerant )	0.30000	-0.52288	.	.
0.67857	5.46371	Danio rerio	2.50000	0.39794	.	.
0.89286	6.24187	Ictalurus punctatus (Intermediate )	4.81063	0.68220	0.02616	0.03835
0.89286	.	-->GEN	.	-2.30259	.	.
0.82143	5.92082	Lepomis cyanellus (Tolerant )	3.68000	0.56585	.	.
0.53571	5.08964	Lepomis gibbosus (Intermediate )	2.20000	0.34242	.	.
0.96429	6.80274	Lepomis macrochirus (Intermediate )	5.84390	0.76670	0.21749	0.28367
0.35714	4.63389	Morone americana (Intermediate )	1.10000	0.04139	.	.
0.46429	4.91036	Morone saxatilis (Intermediate )	1.50000	0.17609	.	.
0.10714	3.75813	Oncorhynchus mykiss (Intermediate )	0.02932	-1.53280	1.12982	0.73709
0.17857	4.07918	Pimephales promelas (Tolerant )	0.03668	-1.43557	1.29495	0.90205
0.60714	5.27188	Poecilia reticulata	2.31000	0.36361	.	.
0.03571	3.19726	early-Pimephales promelas (Tolerant )	0.00890	-2.05061	.	.

### Cadmium SSD for Vertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 45) data for Vertebrate species exposed to cadmium in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	1.75370	4.39960	0.91419	0.34236	3.20738	10	0.092587

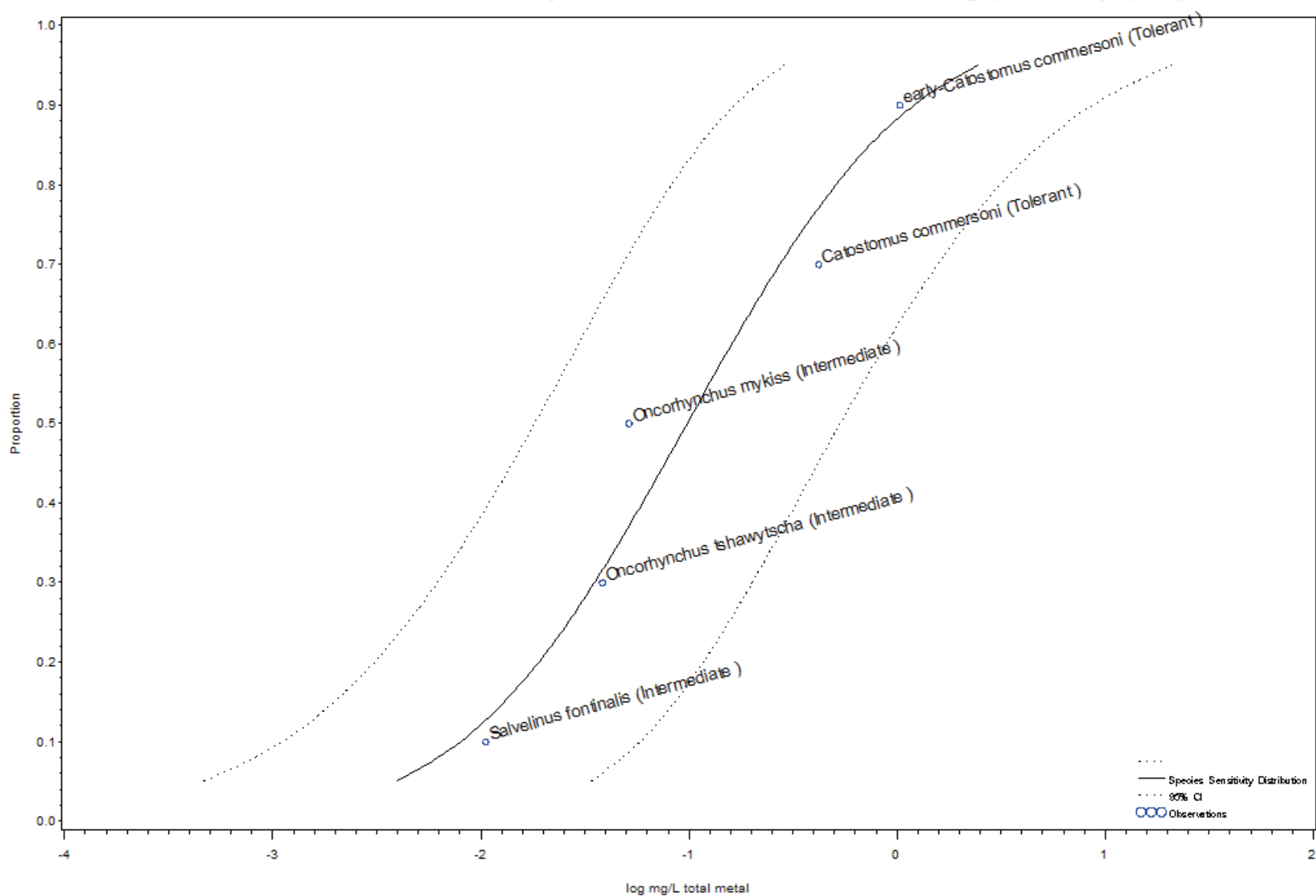
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.2538	0.5900	0.10915	-0.59557	-0.22915	-0.96199	1.89485
0.10	3.71845	0.4089	0.9187	0.18198	-0.38841	-0.03684	-0.73998	1.80177
0.20	4.15838	0.7285	1.5865	0.33455	-0.13755	0.20044	-0.47554	1.71846
0.25	4.32551	0.9073	1.9587	0.42028	-0.04225	0.29197	-0.37646	1.69558
0.30	4.47560	1.1049	2.3705	0.51503	0.04334	0.37484	-0.28816	1.67925
0.50	5.00000	2.1997	4.6739	1.03525	0.34236	0.66968	0.01505	1.65416
0.75	5.67449	5.3330	11.5129	2.47037	0.72697	1.06118	0.39276	1.69558
0.90	6.28155	11.8341	26.5892	5.26699	1.07313	1.42470	0.72156	1.80177
0.95	6.64485	19.0676	44.3316	8.20124	1.28030	1.64671	0.91388	1.89485

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.20833	4.18778	Anguilla rostrata (Intermediate )	1.5000	0.17609	.	.
0.70833	5.54852	Cyprinidae	5.0000	0.69897	.	.
0.12500	3.84965	Cyprinus carpio (Tolerant )	0.4500	-0.34679	.	.
0.95833	6.73166	Ictalurus punctatus (Intermediate )	10.2000	1.00860	.	.
0.87500	6.15035	Lepomis cyanellus (Tolerant )	7.8400	0.89432	.	.
0.54167	5.10463	Lepomis gibbosus (Intermediate )	2.8000	0.44716	.	.
0.79167	5.81222	Lepomis macrochirus (Intermediate )	7.1465	0.85409	0.27595	0.32309
0.29167	4.45148	Morone americana (Intermediate )	1.6000	0.20412	.	.
0.45833	4.89537	Morone saxatilis (Intermediate )	1.9000	0.27875	.	.
0.37500	4.68136	Nothobranchius guentheri	1.7510	0.24329	0.53735	2.20871
0.04167	3.26834	Pimephales promelas (Tolerant )	0.1325	-0.87787	1.27947	1.45747
0.62500	5.31864	Poecilia reticulata	3.3700	0.52763	.	.

# Cadmium SSD for Vertebrates - in very hard water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 46) data for Vertebrate species exposed to cadmium in very hard water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.17928	6.18735	0.95184	-1.00684	2.62461	3	0.061554

Predicted Values

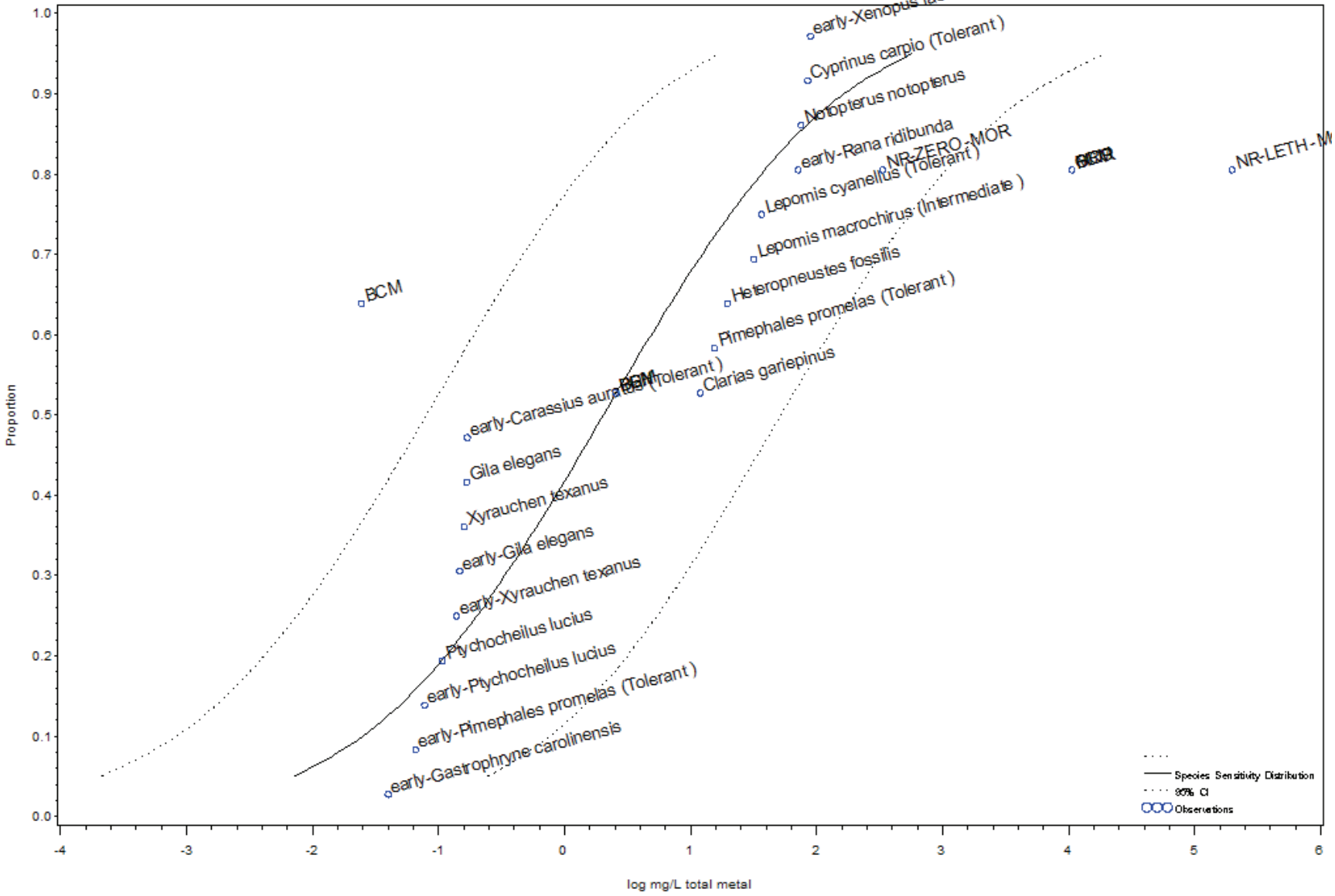
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00397	0.0194	0.00081	-2.40163	-1.71181	-3.09146	4.69155
0.10	3.71845	0.00806	0.0349	0.00186	-2.09356	-1.45759	-2.72953	4.09362
0.20	4.15838	0.01903	0.0731	0.00495	-1.72051	-1.13594	-2.30509	3.58189
0.25	4.32551	0.02638	0.0980	0.00710	-1.57879	-1.00896	-2.14863	3.44468
0.30	4.47560	0.03536	0.1281	0.00976	-1.45152	-0.89239	-2.01065	3.34754
0.50	5.00000	0.09844	0.3432	0.02824	-1.00684	-0.46448	-1.54921	3.19946
0.75	5.67449	0.36737	1.3644	0.09892	-0.43489	0.13494	-1.00473	3.44468
0.90	6.28155	1.20193	5.1981	0.27791	0.07988	0.71585	-0.55609	4.09362
0.95	6.64485	2.44314	11.9611	0.49903	0.38795	1.07777	-0.30188	4.69155

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.7	5.52440	Catostomus commersoni (Tolerant )	0.42280	-0.37387	.	.
0.5	5.00000	Oncorhynchus mykiss (Intermediate )	0.05183	-1.28539	0.53182	0.41374
0.5	.	-->LETC -MOR	.	-3.27771	0.96566	.
0.5	.	-->MOR	.	-5.21214	0.00000	.
0.5	.	-->NOEC -MOR	.	-4.42285	.	.
0.3	4.47560	Oncorhynchus tshawytscha (Intermediate )	0.03850	-1.41458	0.24105	0.17041
0.1	3.71845	Salvelinus fontinalis (Intermediate )	0.01060	-1.97485	0.47861	0.24235
0.9	6.28155	early-Catostomus commersoni (Tolerant )	1.03388	0.01447	0.09413	6.50481



### Cadmium SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 47) data for Vertebrate species exposed to cadmium in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
18	0.67161	4.79196	0.82072	0.30976	30.5221	16	0.18796

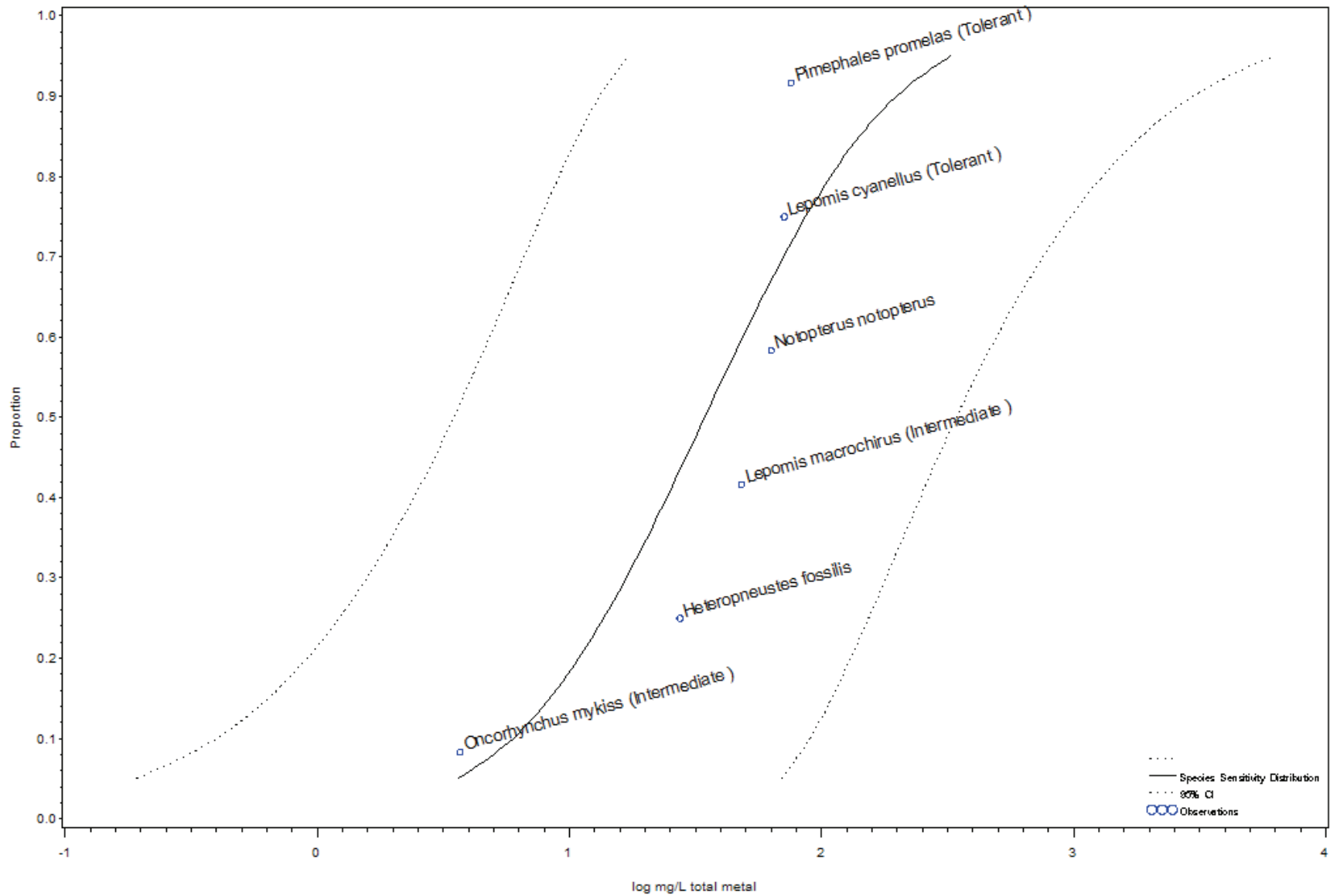
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.007	0.13	0.0004	-2.13935	-0.87828	-3.40042	18.1870
0.10	3.71845	0.025	0.42	0.0015	-1.59841	-0.37685	-2.81997	16.5956
0.20	4.15838	0.114	1.75	0.0074	-0.94337	0.24239	-2.12914	15.2727
0.25	4.32551	0.202	3.03	0.0135	-0.69452	0.48134	-1.87039	14.9255
0.30	4.47560	0.338	4.99	0.0229	-0.47105	0.69774	-1.63983	14.6820
0.50	5.00000	2.041	29.35	0.1419	0.30976	1.46764	-0.84812	14.3146
0.75	5.67449	20.608	308.96	1.3746	1.31404	2.48991	0.13818	14.9255
0.90	6.28155	165.169	2750.99	9.9167	2.21793	3.43949	0.99637	16.5956
0.95	6.64485	573.941	10469.74	31.4629	2.75887	4.01994	1.49780	18.1870

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.52778	5.06968	Clarias gariepinus	12.0000	1.07918	.	.
0.52778	.	-->BCM	.	0.40547	0.00000	.
0.52778	.	-->BEH	.	0.40547	0.00000	.
0.52778	.	-->PHY	.	0.40547	.	.
0.91667	6.38299	Cyprinus carpio (Tolerant )	85.3950	1.93143	0.48699	0.25214
0.91667	.	-->BCM	.	-1.38629	0.00000	.
0.91667	.	-->BEH	.	-1.38629	.	.
0.91667	.	-->NOSIG -BEH	.	0.40547	.	.
0.41667	4.78957	Gila elegans	0.1680	-0.77469	.	.
0.63889	5.35549	Heteropneustes fossilis	19.7000	1.29447	.	.
0.63889	.	-->BCM	.	-1.60944	.	.
0.75000	5.67449	Lepomis cyanellus (Tolerant )	36.7831	1.56565	0.35906	0.22934
0.75000	.	-->FDB	.	1.17326	1.86435	.
0.75000	.	-->GEN	.	0.09972	0.19141	.
0.75000	.	-->GRO	.	1.17326	1.86435	.
0.69444	5.50849	Lepomis macrochirus (Intermediate )	31.8908	1.50366	0.25368	0.16871
0.69444	.	-->ENZ	.	2.60099	0.13661	.
0.69444	.	-->NOEC -MOR	.	3.46574	.	.
0.86111	6.08532	Notopterus notopterus	75.5400	1.87818	.	.
0.58333	5.21043	Pimephales promelas (Tolerant )	15.5331	1.19126	0.56001	0.47010
0.19444	4.13837	Ptychocheilus lucius	0.1080	-0.96658	.	.
0.36111	4.64451	Xyrauchen texanus	0.1600	-0.79588	.	.
0.47222	4.93032	early-Carassius auratus (Tolerant )	0.1700	-0.76955	.	.
0.02778	3.08549	early-Gastrophryne carolinensis	0.0400	-1.39794	.	.
0.30556	4.49151	early-Gila elegans	0.1480	-0.82974	.	.
0.08333	3.61701	early-Pimephales promelas (Tolerant )	0.0662	-1.17926	0.06023	0.05107
0.13889	3.91468	early-Ptychocheilus lucius	0.0780	-1.10791	.	.
0.80556	5.86163	early-Rana ridibunda	71.8000	1.85612	.	.
0.80556	.	-->BCM	.	4.02981	.	.
0.80556	.	-->GRO	.	4.02981	.	.
0.80556	.	-->MOR	.	4.02981	.	.
0.80556	.	-->NR-LETH -MOR	.	5.29832	.	.
0.80556	.	-->NR-ZERO -MOR	.	2.52573	.	.
0.97222	6.91451	early-Xenopus laevis	90.0000	1.95424	.	.
0.25000	4.32551	early-Xyrauchen texanus	0.1390	-0.85699	.	.

# Cadmium SSD for Vertebrates - in very hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 48) data for Vertebrate species exposed to cadmium in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	1.68459	2.40979	0.73992	1.53759	1.25773	4	0.31364

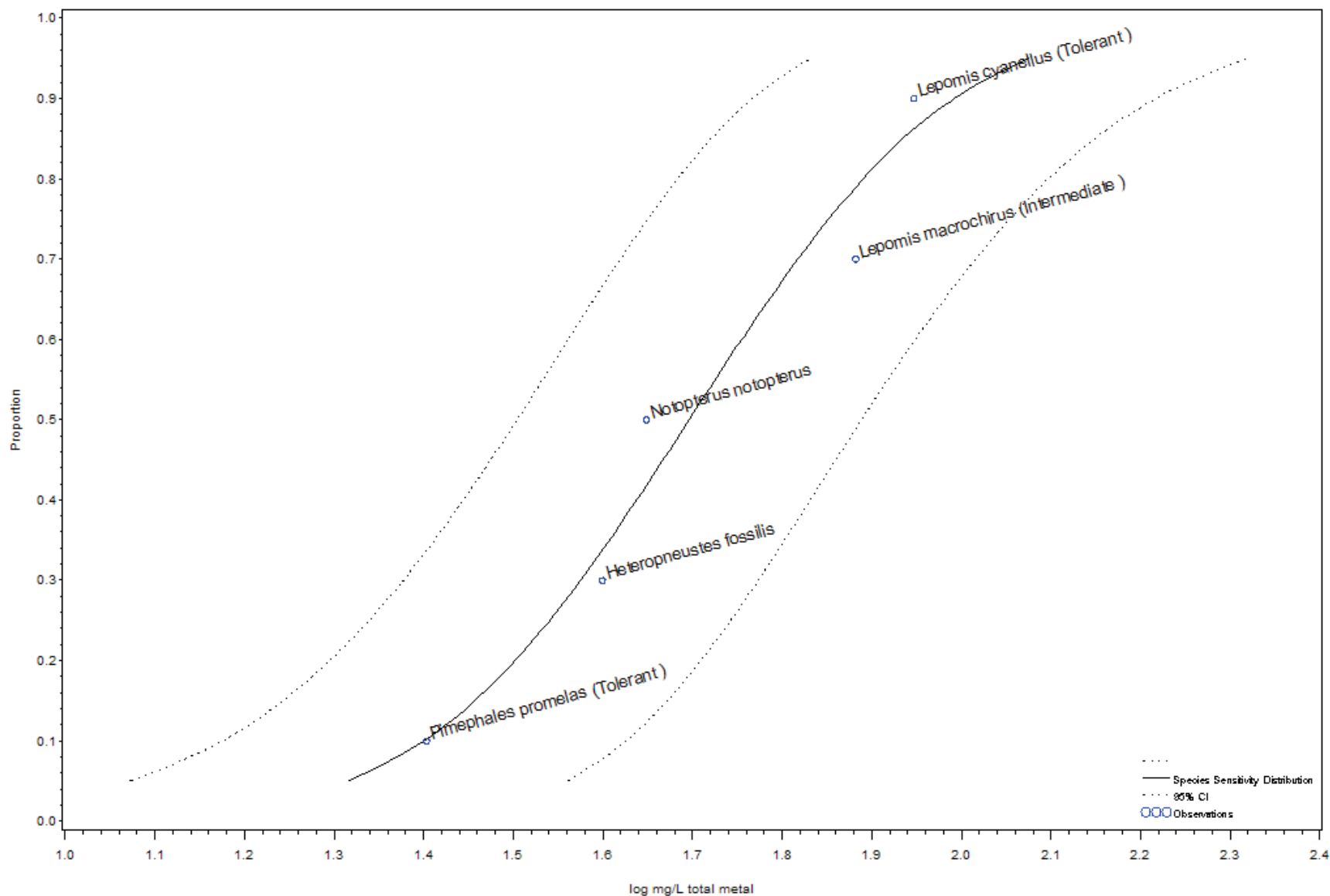
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	3.641	35.03	0.3784	0.56118	1.54442	-0.42206	9.51741
0.10	3.71845	5.982	47.95	0.7463	0.77684	1.68080	-0.12711	7.89120
0.20	4.15838	10.914	73.46	1.6215	1.03799	1.86605	0.20993	6.58217
0.25	4.32551	13.715	87.79	2.1427	1.13720	1.94345	0.33096	6.24471
0.30	4.47560	16.838	103.92	2.7284	1.22630	2.01668	0.43592	6.00936
0.50	5.00000	34.482	200.96	5.9167	1.53759	2.30310	0.77208	5.65629
0.75	5.67449	86.692	554.91	13.5437	1.93798	2.74422	1.13174	6.24471
0.90	6.28155	198.766	1593.30	24.7963	2.29834	3.20230	1.39439	7.89120
0.95	6.64485	326.592	3142.25	33.9445	2.51401	3.49724	1.53077	9.51741

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.25000	4.32551	Heteropneustes fossilis	27.5027	1.43938	0.063532	0.044139
0.75000	5.67449	Lepomis cyanellus (Tolerant )	71.3000	1.85309	.	.
0.41667	4.78957	Lepomis macrochirus (Intermediate )	48.2000	1.68305	.	.
0.41667	.	-->PHY	.	-2.99573	.	.
0.58333	5.21043	Notopterus notopterus	63.3825	1.80197	0.055883	0.031012
0.08333	3.61701	Oncorhynchus mykiss (Intermediate )	3.6980	0.56797	.	.
0.91667	6.38299	Pimephales promelas (Tolerant )	75.8761	1.88010	0.027108	0.014418

### Cadmium SSD for Vertebrates - in very hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 49) data for Vertebrate species exposed to cadmium in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	4.33390	-2.35210	0.95536	1.69641	0.19505	3	0.057064

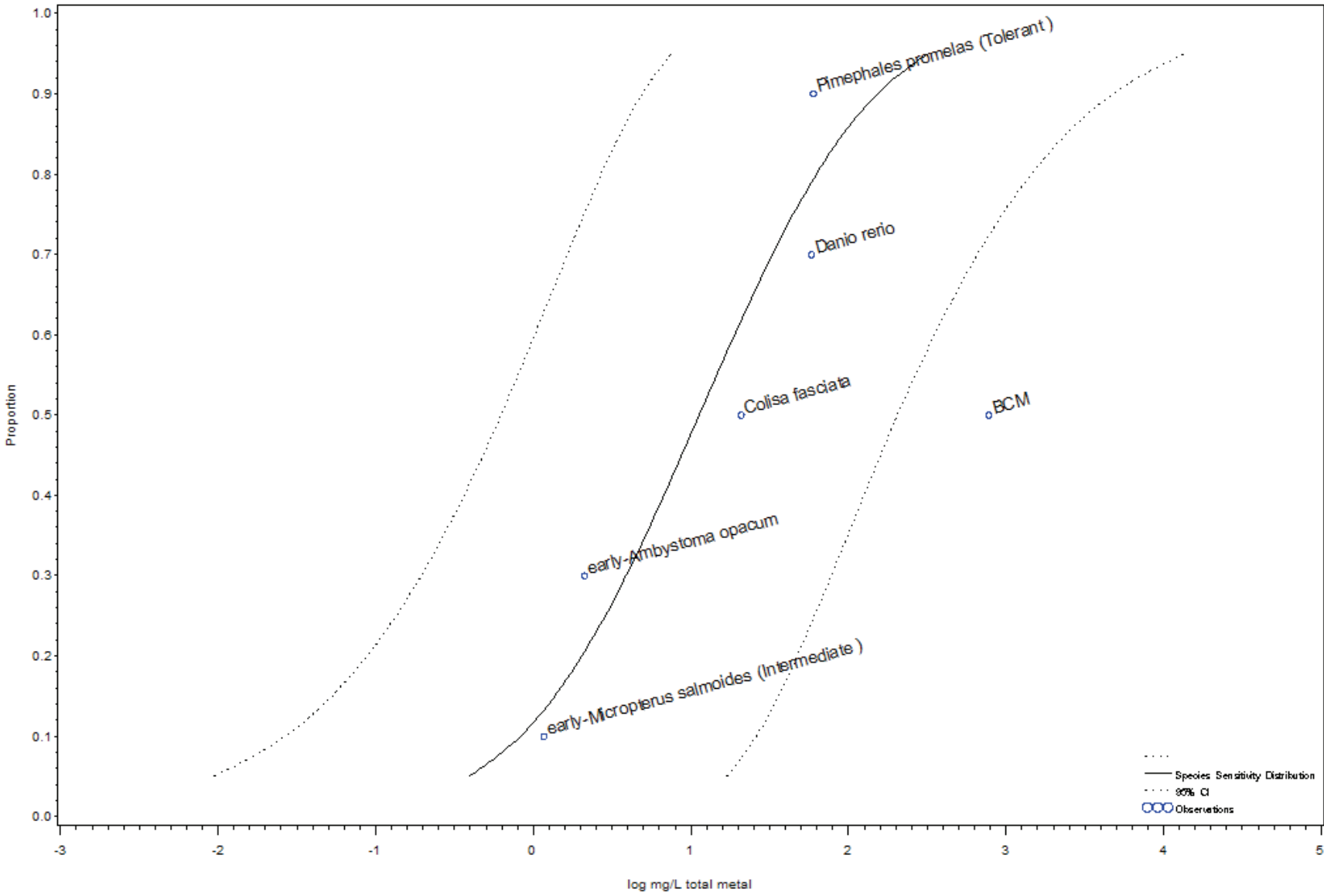
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	20.744	31.440	13.6861	1.31688	1.49749	1.13628	0.85588
0.10	3.71845	25.160	36.919	17.1464	1.40071	1.56725	1.23417	0.78586
0.20	4.15838	31.785	45.220	22.3411	1.50222	1.65534	1.34910	0.71982
0.25	4.32551	34.736	48.984	24.6329	1.54078	1.69005	1.39152	0.70101
0.30	4.47560	37.620	52.709	26.8499	1.57541	1.72189	1.42894	0.68739
0.50	5.00000	49.707	68.946	35.8359	1.69641	1.83851	1.55432	0.66611
0.75	5.67449	71.129	100.303	50.4404	1.85205	2.00131	1.70278	0.70101
0.90	6.28155	98.201	144.097	66.9240	1.99212	2.15865	1.82558	0.78586
0.95	6.64485	119.109	180.530	78.5857	2.07595	2.25655	1.89534	0.85588

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.3	4.47560	Heteropneustes fossilis	39.8000	1.59988	.	.
0.9	6.28155	Lepomis cyanellus (Tolerant )	88.6000	1.94743	.	.
0.7	5.52440	Lepomis macrochirus (Intermediate )	76.3000	1.88252	.	.
0.5	5.00000	Notopterus notopterus	44.5400	1.64875	.	.
0.1	3.71845	Pimephales promelas (Tolerant )	25.3209	1.40348	0.57052	0.40650

# Chromium SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure





Species Sensitivity Distribution (SSD 67) data for Vertebrate species exposed to Chromium in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.13151	3.80856	0.86952	1.05296	2.60432	3	0.16679

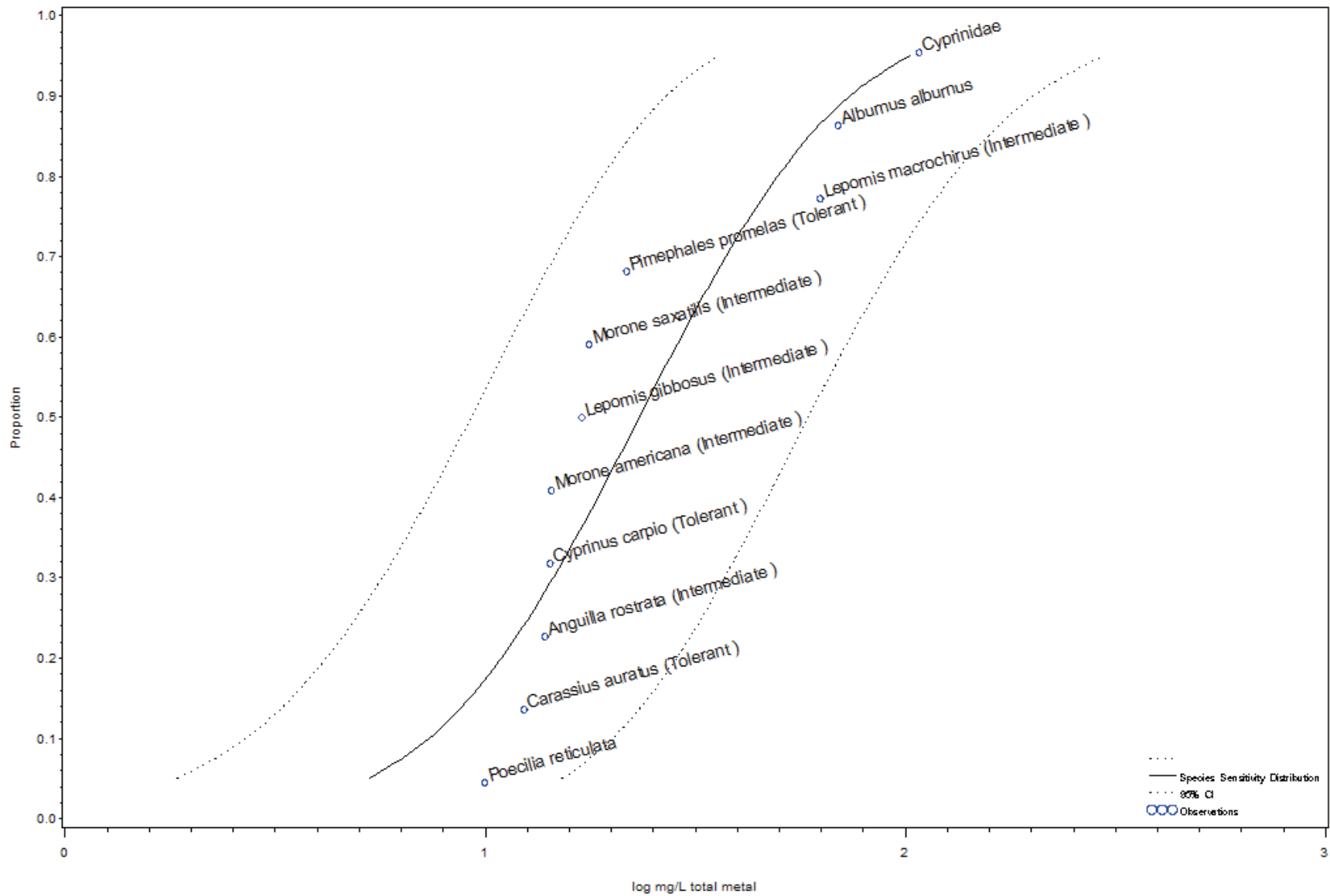
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.397	6.37	0.0248	-0.40071	0.80393	-1.60536	15.9570
0.10	3.71845	0.832	10.60	0.0654	-0.07964	1.02541	-1.18468	12.6579
0.20	4.15838	2.038	20.83	0.1994	0.30916	1.31863	-0.70031	10.1226
0.25	4.32551	2.863	27.47	0.2985	0.45687	1.43881	-0.52507	9.4884
0.30	4.47560	3.886	35.60	0.4242	0.58951	1.55142	-0.37240	9.0511
0.50	5.00000	11.297	96.26	1.3259	1.05296	1.98343	0.12250	8.4031
0.75	5.67449	44.572	427.56	4.6464	1.64906	2.63100	0.66712	9.4884
0.90	6.28155	153.307	1952.59	12.0369	2.18556	3.29061	1.08051	12.6579
0.95	6.64485	321.098	5143.81	20.0443	2.50664	3.71128	1.30199	15.9570

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.5	5.00000	Colisa fasciata	21.00	1.32222	.	.
0.5	.	-->BCM	.	2.89037	.	.
0.7	5.52440	Danio rerio	58.50	1.76716	.	.
0.9	6.28155	Pimephales promelas (Tolerant )	60.10	1.77887	0.00000	0
0.9	.	-->LOEC -BCM	.	3.65434	0.92372	.
0.3	4.47560	early-Ambystoma opacum	2.13	0.32838	.	.
0.1	3.71845	early-Micropterus salmoides (Intermediate )	1.17	0.06819	.	.

### Chromium SSD for Vertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 68) data for Vertebrate species exposed to Chromium in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	2.55939	1.50149	0.82646	1.36693	1.23566	9	0.18884

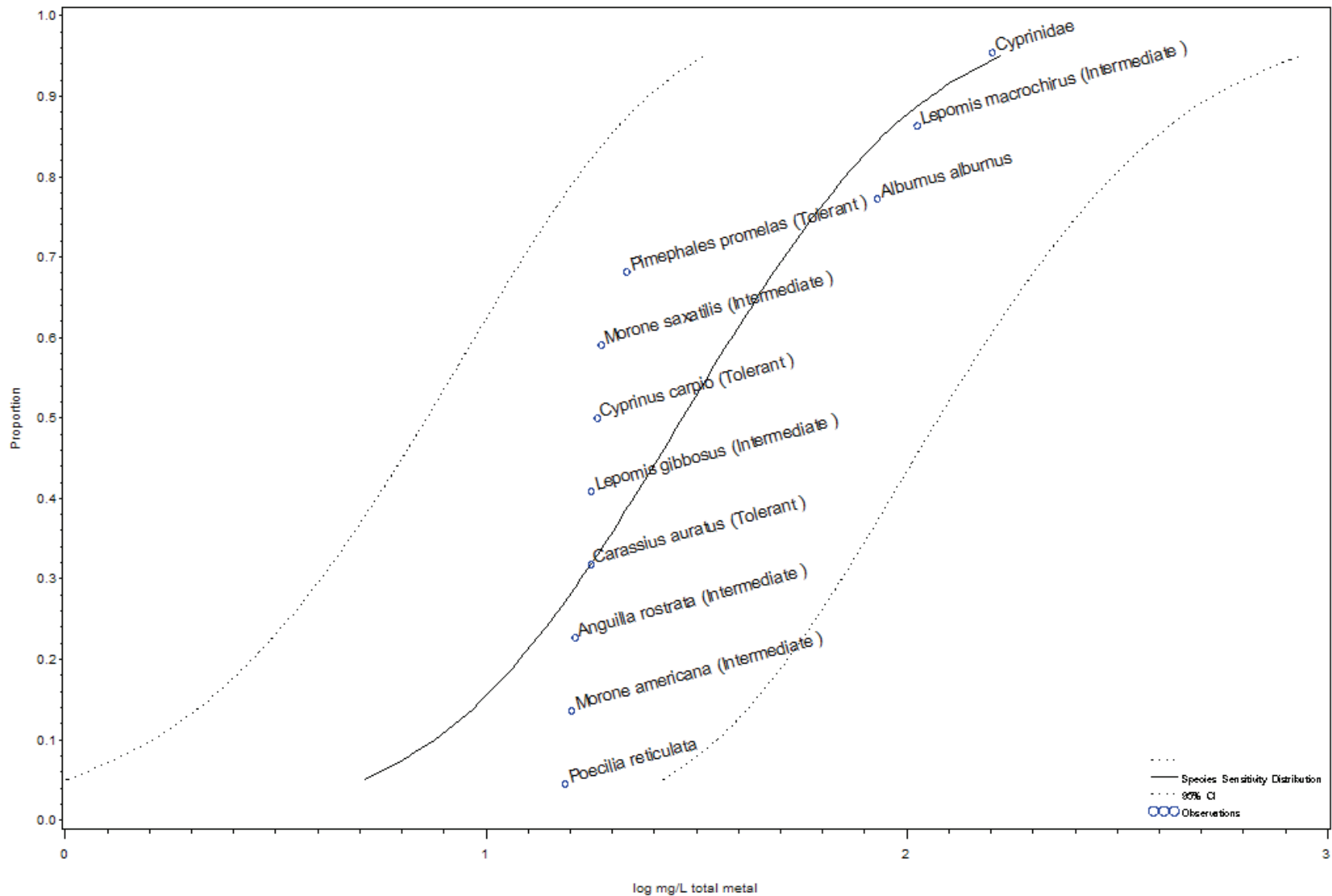
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	5.300	12.469	2.2527	0.72426	1.09582	0.35270	1.92764
0.10	3.71845	7.349	16.605	3.2522	0.86621	1.22024	0.51218	1.81702
0.20	4.15838	10.917	23.767	5.0145	1.03810	1.37597	0.70023	1.71773
0.25	4.32551	12.688	27.337	5.8891	1.10340	1.43675	0.77005	1.69039
0.30	4.47560	14.523	31.056	6.7910	1.16204	1.49215	0.83193	1.67087
0.50	5.00000	23.277	49.206	11.0116	1.36693	1.69202	1.04185	1.64084
0.75	5.67449	42.704	92.008	19.8206	1.63047	1.96382	1.29712	1.69039
0.90	6.28155	73.733	166.605	32.6312	1.86766	2.22169	1.51363	1.81702
0.95	6.64485	102.237	240.533	43.4556	2.00961	2.38117	1.63805	1.92764

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.86364	6.09680	Alburnus alburnus	69.200	1.84011	.	.
0.22727	4.25214	Anguilla rostrata (Intermediate )	13.900	1.14301	.	.
0.13636	3.90320	Carassius auratus (Tolerant )	12.400	1.09341	0.67970	0.62164
0.95455	6.69062	Cyprinidae	108.000	2.03342	.	.
0.31818	4.52721	Cyprinus carpio (Tolerant )	14.300	1.15534	.	.
0.50000	5.00000	Lepomis gibbosus (Intermediate )	17.000	1.23045	.	.
0.77273	5.74786	Lepomis macrochirus (Intermediate )	62.806	1.79800	0.61732	0.34334
0.40909	4.77012	Morone americana (Intermediate )	14.400	1.15836	.	.
0.59091	5.22988	Morone saxatilis (Intermediate )	17.700	1.24797	.	.
0.68182	5.47279	Pimephales promelas (Tolerant )	21.698	1.33643	0.39082	0.29244
0.04545	3.30938	Poecilia reticulata	9.995	0.99978	0.67506	0.67521

### Chromium SSD for Vertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 69) data for Vertebrate species exposed to Chromium in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	2.17633	1.80699	0.71154	1.46715	1.47128	9	0.31390

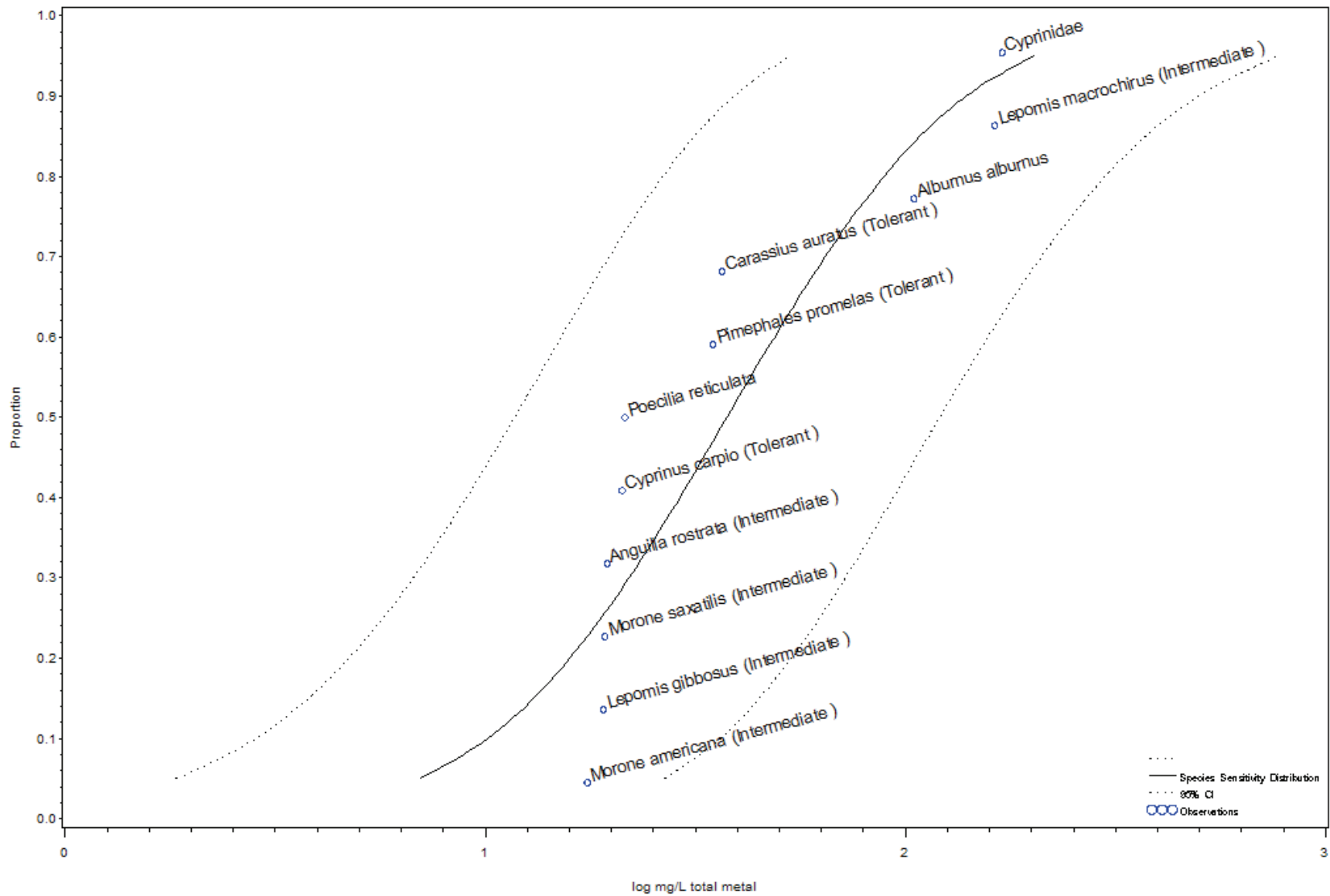
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	5.145	19.289	1.3722	0.71136	1.28530	0.13742	3.48247
0.10	3.71845	7.556	26.414	2.1615	0.87829	1.42183	0.33476	3.20963
0.20	4.15838	12.035	39.426	3.6736	1.08044	1.59578	0.56509	2.97075
0.25	4.32551	14.363	46.202	4.4648	1.15723	1.66466	0.64981	2.90595
0.30	4.47560	16.834	53.447	5.3024	1.22620	1.72793	0.72447	2.85992
0.50	5.00000	29.319	91.211	9.4245	1.46715	1.96005	0.97426	2.78950
0.75	5.67449	59.851	192.531	18.6057	1.77707	2.28450	1.26965	2.90595
0.90	6.28155	113.766	397.690	32.5445	2.05601	2.59955	1.51248	3.20963
0.95	6.64485	167.088	626.444	44.5662	2.22294	2.79688	1.64901	3.48247

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.77273	5.74786	Alburnus alburnus	85.200	1.93044	.	.
0.22727	4.25214	Anguilla rostrata (Intermediate )	16.300	1.21219	.	.
0.31818	4.52721	Carassius auratus (Tolerant )	17.770	1.24968	0.73497	0.58813
0.95455	6.69062	Cyprinidae	160.000	2.20412	.	.
0.50000	5.00000	Cyprinus carpio (Tolerant )	18.400	1.26482	.	.
0.40909	4.77012	Lepomis gibbosus (Intermediate )	17.800	1.25042	.	.
0.86364	6.09680	Lepomis macrochirus (Intermediate )	106.005	2.02533	0.37915	0.18720
0.13636	3.90320	Morone americana (Intermediate )	16.000	1.20412	.	.
0.59091	5.22988	Morone saxatilis (Intermediate )	18.800	1.27416	.	.
0.68182	5.47279	Pimephales promelas (Tolerant )	21.654	1.33554	0.45734	0.34244
0.04545	3.30938	Poecilia reticulata	15.412	1.18787	0.85194	0.71720

### Chromium SSD for Vertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 70) data for Vertebrate species exposed to Chromium in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	2.25162	1.45274	0.78651	1.57543	1.51937	9	0.23231

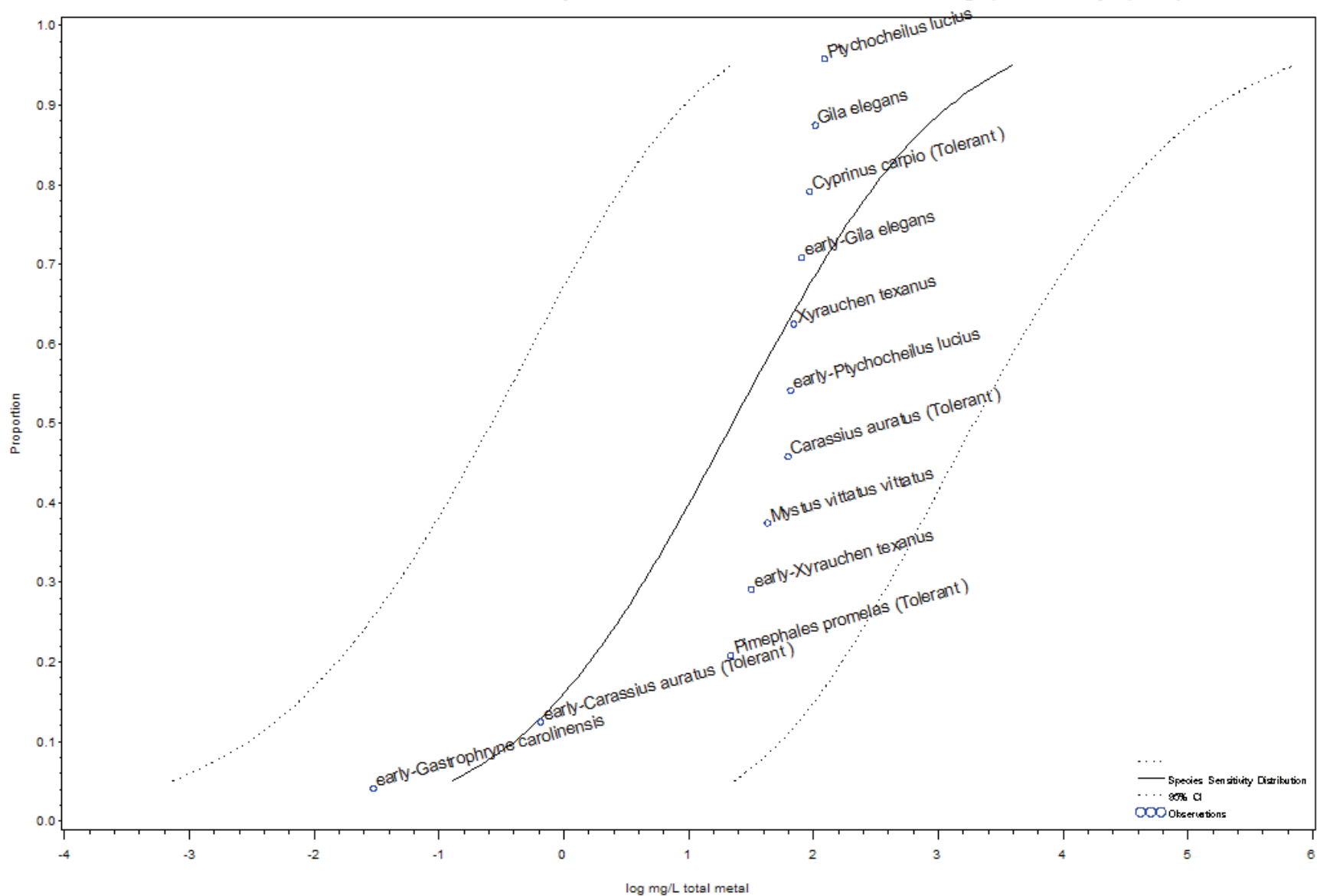
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	6.997	20.708	2.3641	0.84491	1.31614	0.37367	2.62172
0.10	3.71845	10.145	28.469	3.6153	1.00626	1.45438	0.55814	2.44983
0.20	4.15838	15.909	42.503	5.9548	1.20164	1.62842	0.77487	2.29731
0.25	4.32551	18.874	49.736	7.1626	1.27587	1.69667	0.85507	2.25562
0.30	4.47560	22.005	57.416	8.4339	1.34253	1.75903	0.92603	2.22591
0.50	5.00000	37.621	96.667	14.6413	1.57543	1.98528	1.16558	2.18033
0.75	5.67449	74.987	197.599	28.4569	1.87499	2.29579	1.45419	2.25562
0.90	6.28155	139.508	391.484	49.7144	2.14460	2.59271	1.69648	2.44983
0.95	6.64485	202.279	598.663	68.3466	2.30595	2.77718	1.83472	2.62172

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.77273	5.74786	Alburnus alburnus	105.000	2.02119	.	.
0.31818	4.52721	Anguilla rostrata (Intermediate )	19.500	1.29003	.	.
0.68182	5.47279	Carassius auratus (Tolerant )	36.633	1.56388	0.73890	0.47248
0.95455	6.69062	Cyprinidae	170.000	2.23045	.	.
0.40909	4.77012	Cyprinus carpio (Tolerant )	21.200	1.32634	.	.
0.13636	3.90320	Lepomis gibbosus (Intermediate )	19.100	1.28103	.	.
0.86364	6.09680	Lepomis macrochirus (Intermediate )	163.420	2.21330	0.33651	0.15204
0.04545	3.30938	Morone americana (Intermediate )	17.500	1.24304	.	.
0.22727	4.25214	Morone saxatilis (Intermediate )	19.300	1.28556	.	.
0.59091	5.22988	Pimephales promelas (Tolerant )	34.831	1.54197	0.57036	0.36989
0.50000	5.00000	Poecilia reticulata	21.524	1.33293	1.01844	0.76406

### Chromium SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure





Species Sensitivity Distribution (SSD 71) data for Vertebrate species exposed to Chromium in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	0.73430	4.00718	0.65250	1.35207	13.0574	10	0.37496

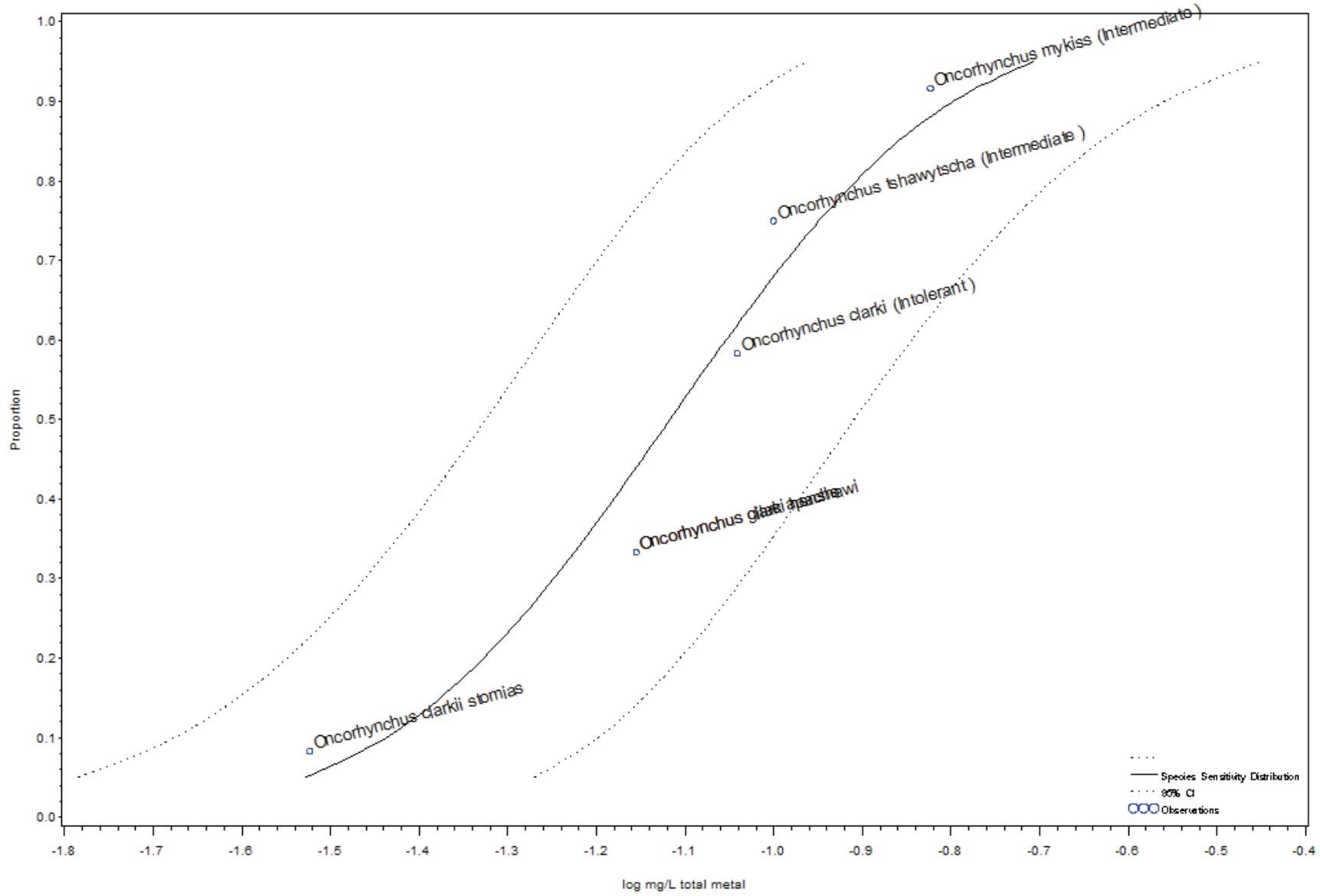
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.13	8.77	0.0019	-0.88797	0.94306	-2.71900	67.7542
0.10	3.71845	0.40	21.93	0.0075	-0.39321	1.34106	-2.12749	54.2158
0.20	4.15838	1.61	70.87	0.0364	0.20591	1.85048	-1.43867	44.0914
0.25	4.32551	2.71	112.95	0.0652	0.43351	2.05290	-1.18587	41.6041
0.30	4.47560	4.34	173.45	0.1088	0.63791	2.23917	-0.96335	39.9012
0.50	5.00000	22.49	841.81	0.6011	1.35207	2.92522	-0.22108	37.3972
0.75	5.67449	186.47	7762.56	4.4795	2.27062	3.89000	0.65123	41.6041
0.90	6.28155	1251.25	67860.48	23.0712	3.09734	4.83162	1.36307	54.2158
0.95	6.64485	3909.35	264933.00	57.6865	3.59211	5.42314	1.76107	67.7542

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.45833	4.89537	Carassius auratus (Tolerant )	62.929	1.79885	0.39645	0.22039
0.79167	5.81222	Cyprinus carpio (Tolerant )	93.600	1.97128	.	.
0.87500	6.15035	Gila elegans	104.000	2.01703	.	.
0.37500	4.68136	Mystus vittatus vittatus	42.975	1.63322	0.07568	0.04634
0.20833	4.18778	Pimephales promelas (Tolerant )	21.856	1.33956	0.32433	0.24211
0.95833	6.73166	Ptychocheilus lucius	123.000	2.08991	.	.
0.62500	5.31864	Xyrauchen texanus	70.000	1.84510	.	.
0.12500	3.84965	early-Carassius auratus (Tolerant )	0.660	-0.18046	.	.
0.04167	3.26834	early-Gastrophryne carolinensis	0.030	-1.52288	.	.
0.70833	5.54852	early-Gila elegans	81.000	1.90849	.	.
0.54167	5.10463	early-Ptychocheilus lucius	66.000	1.81954	.	.
0.29167	4.45148	early-Xyrauchen texanus	32.000	1.50515	.	.

### Copper SSD for Vertebrates - in hard water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 100) data for Vertebrate species exposed to copper in hard water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	4.00571	9.47481	0.93437	-1.11613	0.27343	4	0.077042

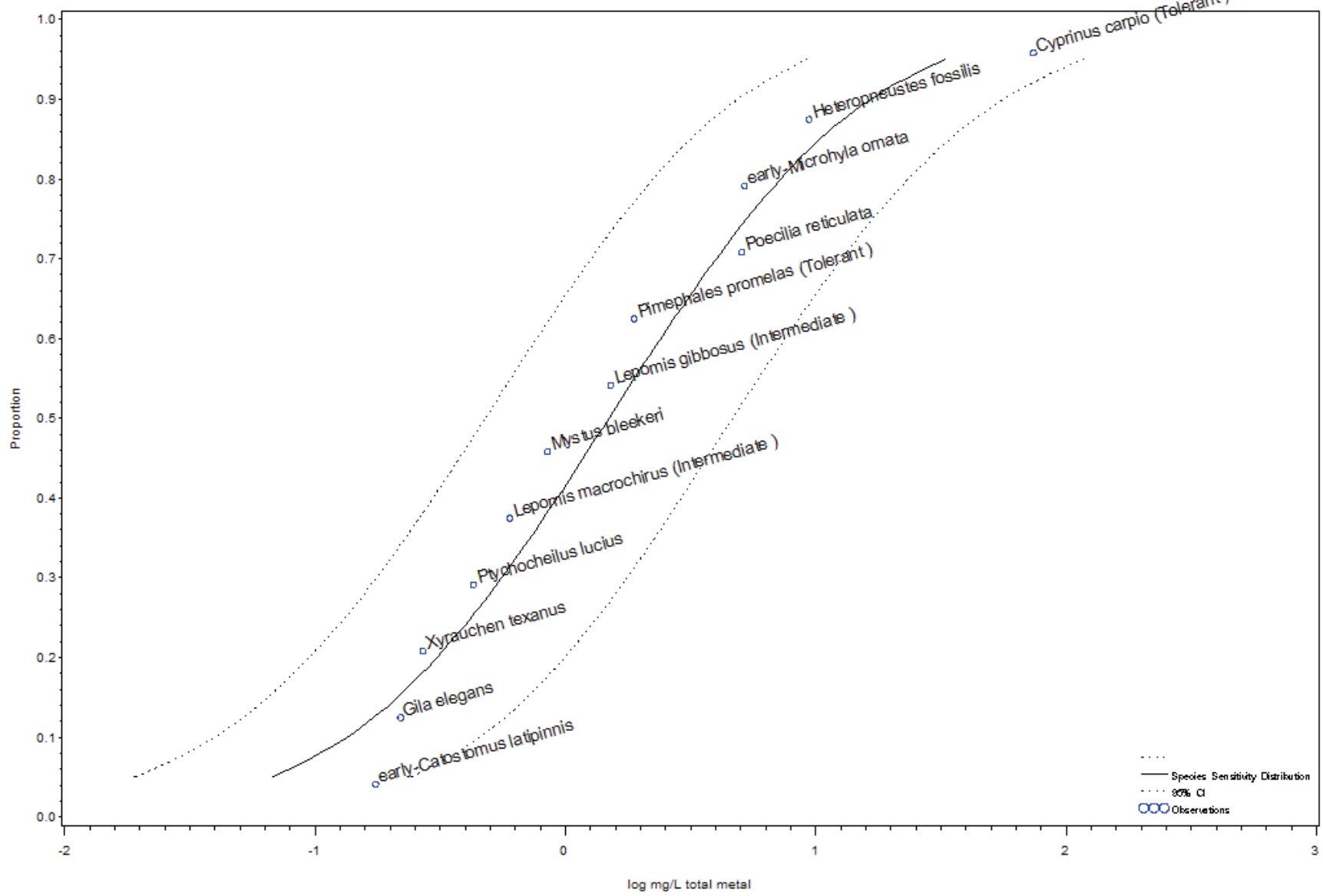
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.02967	0.04674	0.01883	-1.52773	-1.33030	-1.72516	0.94084
0.10	3.71845	0.03656	0.05578	0.02396	-1.43704	-1.25353	-1.62055	0.87048
0.20	4.15838	0.04707	0.06968	0.03180	-1.32721	-1.15688	-1.49755	0.80469
0.25	4.32551	0.05182	0.07605	0.03531	-1.28549	-1.11891	-1.45206	0.78605
0.30	4.47560	0.05649	0.08238	0.03874	-1.24802	-1.08417	-1.41187	0.77258
0.50	5.00000	0.07636	0.11027	0.05289	-1.11711	-0.95755	-1.27666	0.75143
0.75	5.67449	0.11253	0.16508	0.07671	-0.94873	-0.78231	-1.11514	0.78527
0.90	6.28155	0.15952	0.24326	0.10461	-0.79718	-0.61394	-0.98042	0.86911
0.95	6.64485	0.19657	0.30947	0.12486	-0.70648	-0.50937	-0.90359	0.93919

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.58333	5.21043	Oncorhynchus clarki (Intolerant )	0.09100	-1.04096	.	.
0.33333	4.56927	Oncorhynchus clarki henshawi	0.07000	-1.15490	.	.
0.08333	3.61701	Oncorhynchus clarkii stomias	0.03000	-1.52288	.	.
0.33333	4.56927	Oncorhynchus gilae apache	0.07000	-1.15490	.	.
0.91667	6.38299	Oncorhynchus mykiss (Intermediate )	0.15026	-0.82315	0.18126	0.22020
0.91667	.	-->GRO	.	-4.10439	.	.
0.91667	.	-->MOR	.	-3.27890	1.16742	.
0.75000	5.67449	Oncorhynchus tshawytscha (Intermediate )	0.10000	-1.00000	.	.

### Copper SSD for Vertebrates - in hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 101) data for Vertebrate species exposed to copper in hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	1.22572	4.78711	0.93672	0.17369	6.72739	10	0.068281

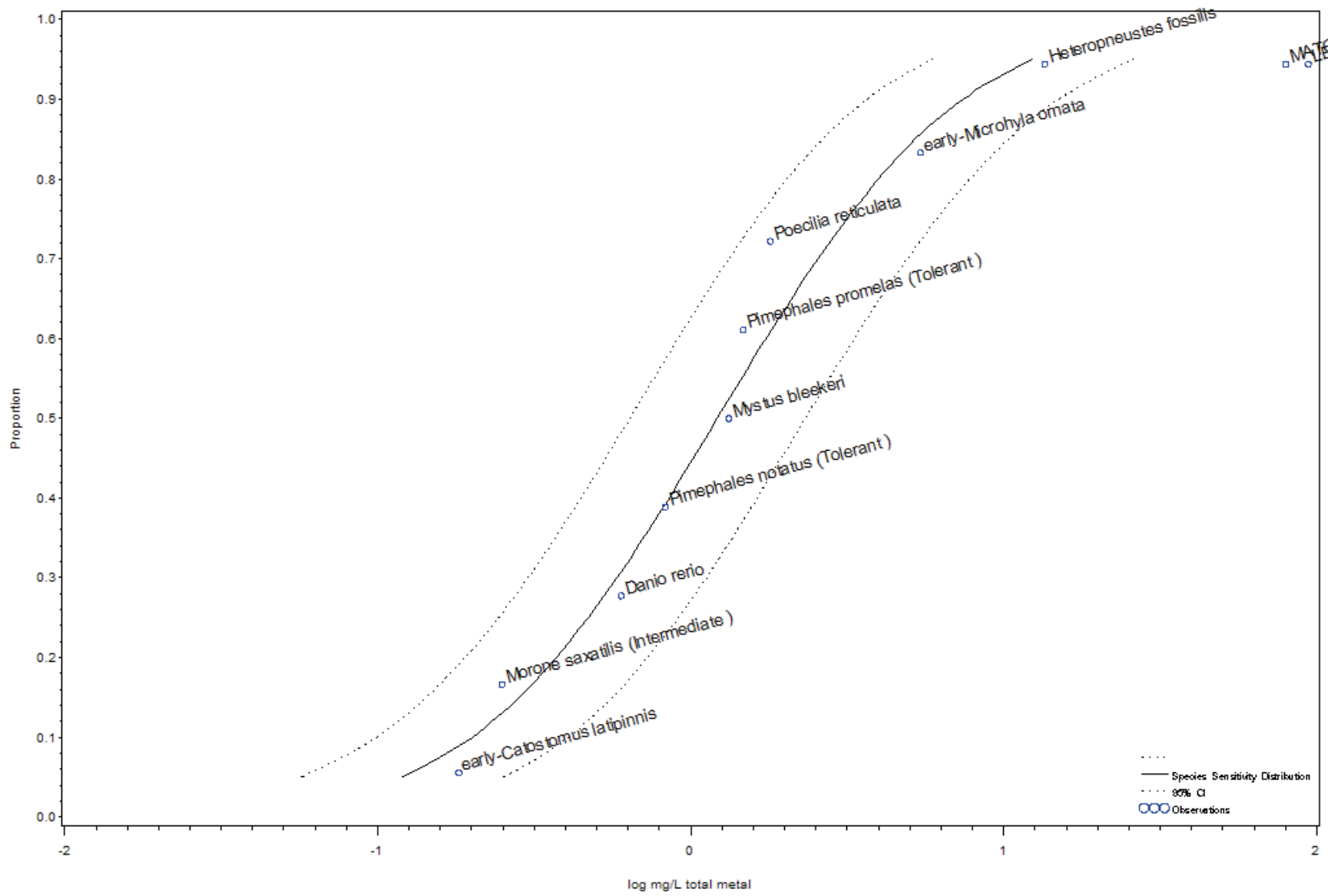
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0679	0.1909	0.0241	-1.16826	-0.71914	-1.61737	2.45710
0.10	3.71845	0.1343	0.3626	0.0498	-0.87186	-0.44058	-1.30313	2.32901
0.20	4.15838	0.3069	0.7980	0.1181	-0.51294	-0.09797	-0.92791	2.21537
0.25	4.32551	0.4202	1.0811	0.1633	-0.37659	0.03385	-0.78703	2.18433
0.30	4.47560	0.5570	1.4225	0.2181	-0.25414	0.15305	-0.66133	2.16222
0.50	5.00000	1.4917	3.7658	0.5909	0.17369	0.57586	-0.22848	2.12833
0.75	5.67449	5.2962	13.6271	2.0584	0.72397	1.13440	0.31353	2.18433
0.90	6.28155	16.5667	44.7209	6.1370	1.21924	1.65051	0.78796	2.32901
0.95	6.64485	32.7818	92.2034	11.6552	1.51563	1.96475	1.06652	2.45710

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.95833	6.73166	Cyprinus carpio (Tolerant )	74.2967	1.87097	0.47115	0.25182
0.12500	3.84965	Gila elegans	0.2200	-0.65758	.	.
0.87500	6.15035	Heteropneustes fossilis	9.4400	0.97497	.	.
0.54167	5.10463	Lepomis gibbosus (Intermediate )	1.5195	0.18171	0.07964	0.43828
0.37500	4.68136	Lepomis macrochirus (Intermediate )	0.6000	-0.22185	.	.
0.45833	4.89537	Mystus bleekeri	0.8500	-0.07058	.	.
0.62500	5.31864	Pimephales promelas (Tolerant )	1.8898	0.27641	0.33953	1.22838
0.70833	5.54852	Poecilia reticulata	5.0785	0.70574	1.38175	1.95787
0.29167	4.45148	Ptychocheilus lucius	0.4300	-0.36653	.	.
0.20833	4.18778	Xyrauchen texanus	0.2700	-0.56864	.	.
0.04167	3.26834	early-Catostomus latipinnis	0.1750	-0.75696	.	.
0.79167	5.81222	early-Microhyla ornata	5.2072	0.71661	0.02005	0.02798

Copper SSD for Vertebrates - in hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 102) data for Vertebrate species exposed to copper in hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	1.63501	4.86021	0.96968	0.085499	2.83031	7	0.033793

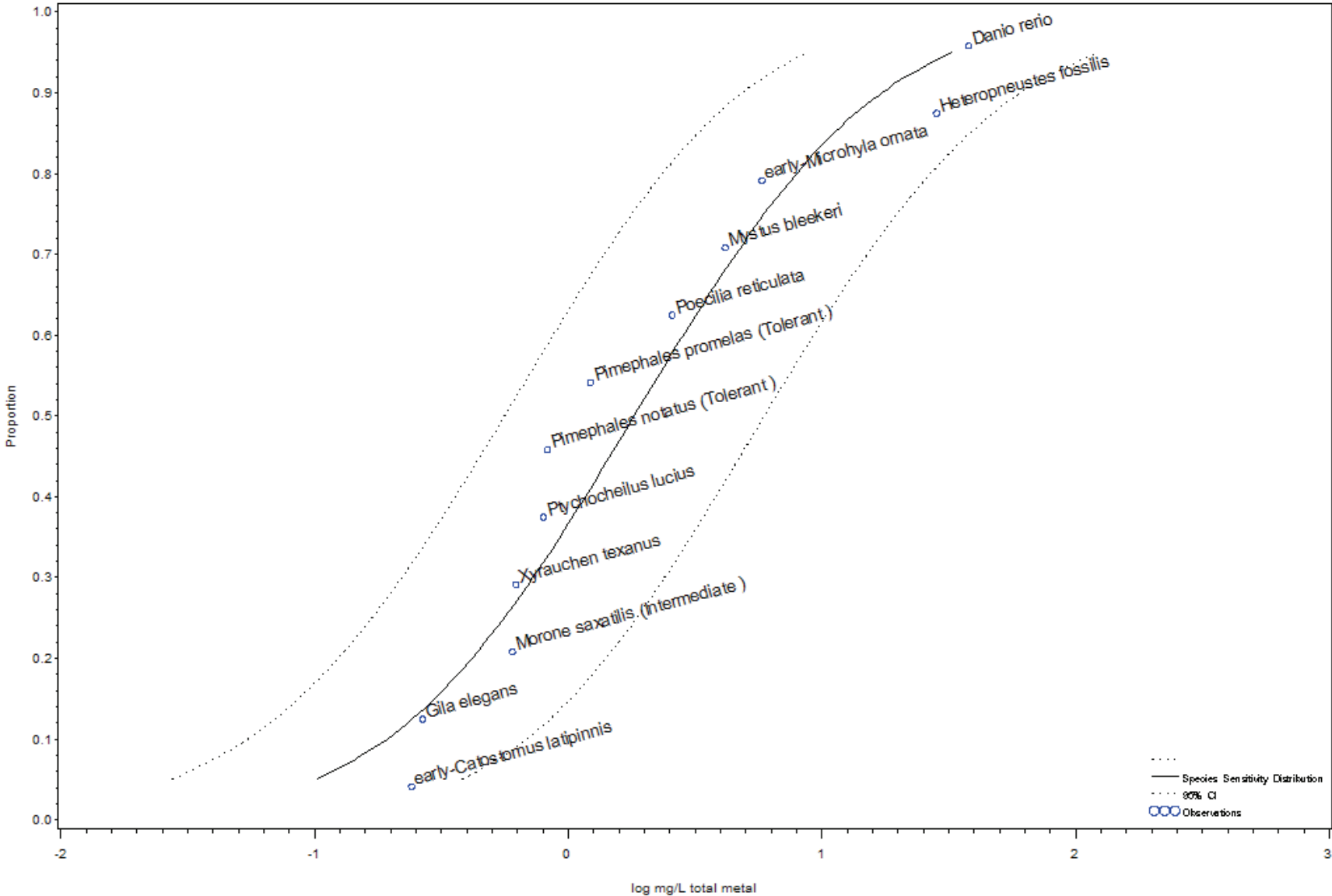
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.1201	0.2176	0.06627	-0.92052	-0.66237	-1.17867	1.26007
0.10	3.71845	0.2003	0.3525	0.11381	-0.69832	-0.45283	-0.94381	1.19169
0.20	4.15838	0.3722	0.6376	0.21724	-0.42925	-0.19545	-0.66305	1.12946
0.25	4.32551	0.4709	0.8008	0.27697	-0.32703	-0.09650	-0.55756	1.11219
0.30	4.47560	0.5818	0.9839	0.34403	-0.23523	-0.00706	-0.46341	1.09981
0.50	5.00000	1.2176	2.0419	0.72605	0.08550	0.31003	-0.13903	1.08070
0.75	5.67449	3.1480	5.3525	1.85140	0.49803	0.72856	0.26750	1.11219
0.90	6.28155	7.4015	13.0259	4.20561	0.86932	1.11481	0.62383	1.19169
0.95	6.64485	12.3458	22.3701	6.81351	1.09152	1.34967	0.83337	1.26007

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.27778	4.41054	Danio rerio	0.6000	-0.22185	.	.
0.94444	6.59322	Heteropneustes fossilis	13.5607	1.13228	0.05496	0.04854
0.94444	.	-->LETC -MOR	.	1.97408	.	.
0.94444	.	-->MATC -MOR	.	1.90211	.	.
0.16667	4.03258	Morone saxatilis (Intermediate )	0.2500	-0.60207	0.28381	0.47140
0.50000	5.00000	Mystus bleekeri	1.3257	0.12245	0.20467	1.67150
0.38889	4.71778	Pimephales notatus (Tolerant )	0.8312	-0.08031	0.79839	9.94111
0.61111	5.28222	Pimephales promelas (Tolerant )	1.4758	0.16903	0.49425	2.92403
0.72222	5.58946	Poecilia reticulata	1.8000	0.25527	.	.
0.05556	3.40678	early-Catostomus latipinnis	0.1820	-0.73993	0.00000	0.00000
0.83333	5.96742	early-Microhyla ornata	5.4277	0.73462	0.02097	0.02855

Copper SSD for Vertebrates - in hard water at T>15C over short (<=1 day) exposure





Species Sensitivity Distribution (SSD 103) data for Vertebrate species exposed to copper in hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	1.31544	4.65698	0.92190	0.26077	5.74867	10	0.084267

Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.1024	0.2992	0.0351	-0.98966	-0.52402	-1.45529	2.57945
0.10	3.71845	0.1934	0.5413	0.0691	-0.71347	-0.26657	-1.16037	2.44099
0.20	4.15838	0.4178	1.1239	0.1553	-0.37904	0.05073	-0.80880	2.31835
0.25	4.32551	0.5598	1.4894	0.2104	-0.25198	0.17302	-0.67698	2.28488
0.30	4.47560	0.7280	1.9217	0.2758	-0.13788	0.28370	-0.55946	2.26105
0.50	5.00000	1.8229	4.7541	0.6990	0.26077	0.67707	-0.15554	2.22453
0.75	5.67449	5.9363	15.7948	2.2311	0.77352	1.19851	0.34852	2.28488
0.90	6.28155	17.1793	48.0737	6.1391	1.23501	1.68191	0.78811	2.44099
0.95	6.64485	32.4481	94.8043	11.1058	1.51119	1.97683	1.04555	2.57945

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.95833	6.73166	Danio rerio	37.9580	1.57930	0.50000	0.31660
0.12500	3.84965	Gila elegans	0.2683	-0.57133	0.06853	0.11994
0.87500	6.15035	Heteropneustes fossilis	28.3900	1.45317	.	.
0.20833	4.18778	Morone saxatilis (Intermediate )	0.6038	-0.21909	0.20730	0.94619
0.20833	.	-->MOR	.	0.91829	.	.
0.70833	5.54852	Mystus bleekeri	4.1700	0.62014	.	.
0.45833	4.89537	Pimephales notatus (Tolerant )	0.8312	-0.08031	0.79839	9.94111
0.54167	5.10463	Pimephales promelas (Tolerant )	1.2254	0.08828	0.33790	3.82767
0.62500	5.31864	Poecilia reticulata	2.5800	0.41162	.	.
0.37500	4.68136	Ptychocheilus lucius	0.8000	-0.09691	0.13705	1.41421
0.29167	4.45148	Xyrauchen texanus	0.6245	-0.20447	0.28916	1.41421
0.04167	3.26834	early-Catostomus latipinnis	0.2420	-0.61618	.	.
0.79167	5.81222	early-Microhyla ornata	5.8210	0.76500	0.02268	0.02965

# Copper SSD for Vertebrates - in moderately hard water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 104) data for Vertebrate species exposed to copper in moderately hard water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	3.14153	8.28395	0.93468	-1.04533	0.73896	7	0.072815

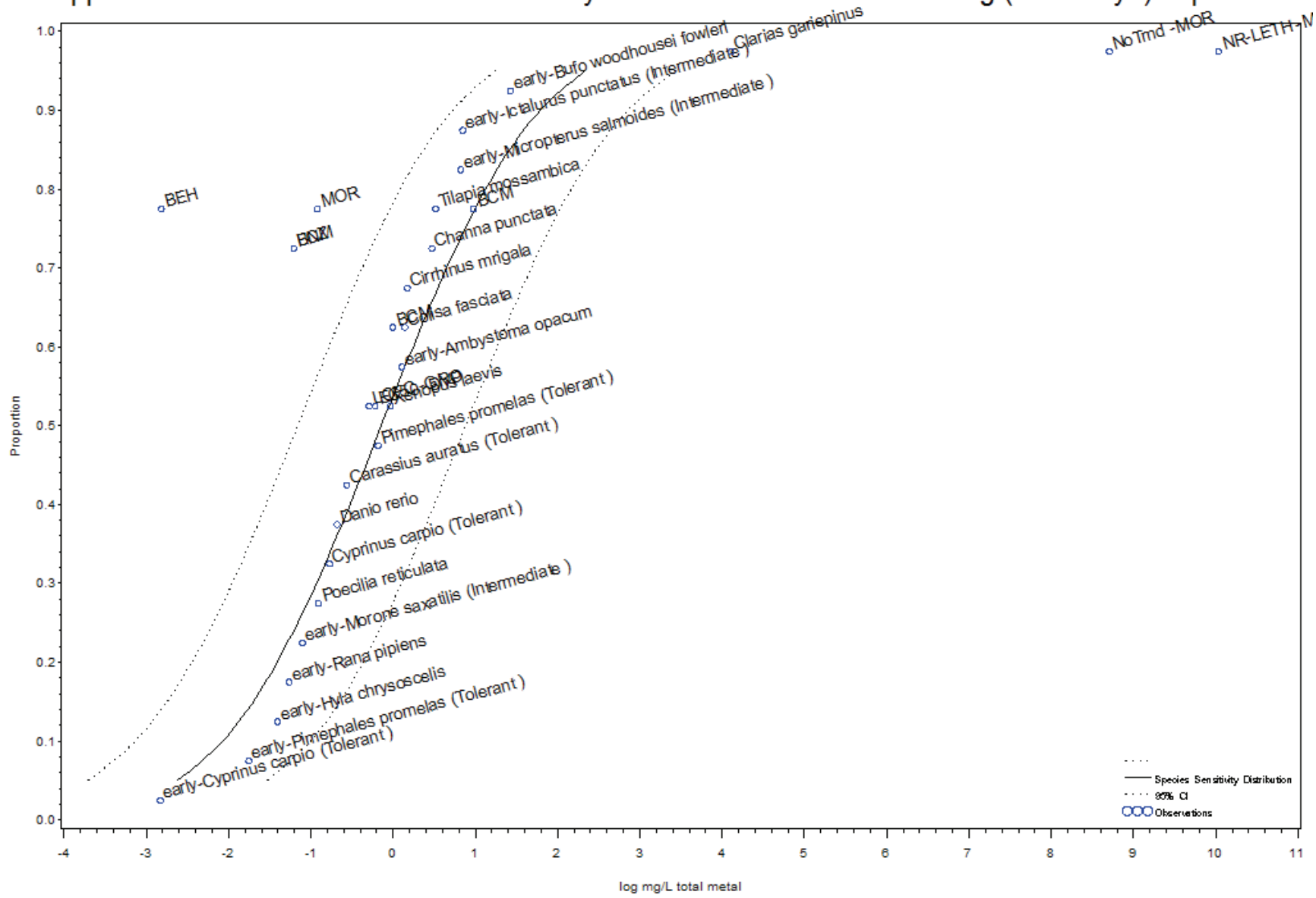
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.02698	0.04258	0.01710	-1.56892	-1.37080	-1.76703	0.94433
0.10	3.71845	0.03522	0.05431	0.02284	-1.45327	-1.26515	-1.64139	0.89367
0.20	4.15838	0.04861	0.07339	0.03220	-1.31324	-1.13436	-1.49211	0.84725
0.25	4.32551	0.05495	0.08246	0.03662	-1.26003	-1.08375	-1.43632	0.83431
0.30	4.47560	0.06134	0.09166	0.04105	-1.21226	-1.03783	-1.38668	0.82502
0.50	5.00000	0.09009	0.13372	0.06069	-1.04533	-0.87380	-1.21687	0.81066
0.75	5.67449	0.14770	0.22164	0.09842	-0.83063	-0.65435	-1.00692	0.83431
0.90	6.28155	0.23046	0.35541	0.14945	-0.63740	-0.44928	-0.82552	0.89367
0.95	6.64485	0.30078	0.47464	0.19060	-0.52175	-0.32364	-0.71987	0.94433

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.38889	4.71778	Oncorhynchus clarki (Intolerant )	0.08481	-1.07155	0.39749	0.37095
0.94444	6.59322	Oncorhynchus gorbuscha (Intermediate )	0.19900	-0.70115	.	.
0.27778	4.41054	Oncorhynchus kisutch (Intermediate )	0.06774	-1.16917	0.04221	0.03610
0.27778	.	-->ENZ	.	-3.15825	.	.
0.27778	.	-->HRM	.	-2.83896	0.37229	.
0.27778	.	-->MOR	.	-4.28309	.	.
0.27778	.	-->NR-ZERO -MOR	.	-2.94124	.	.
0.27778	.	-->NoTrend -MOR	.	-2.57571	0.00000	.
0.05556	3.40678	Oncorhynchus mykiss (Intermediate )	0.02192	-1.65910	0.43958	0.26495
0.05556	.	-->CEL	.	-3.91202	.	.
0.05556	.	-->HIS	.	-1.74297	.	.
0.05556	.	-->LETC -MOR	.	-2.60441	0.29137	.
0.83333	5.96742	Oncorhynchus nerka	0.18947	-0.72246	0.07913	0.10953
0.16667	4.03258	Oncorhynchus tshawytscha (Intermediate )	0.05000	-1.30103	0.00000	0.00000
0.61111	5.28222	early-Oncorhynchus gorbuscha (Intermediate )	0.11154	-0.95257	0.15261	0.16020
0.50000	5.00000	early-Oncorhynchus mykiss (Intermediate )	0.09899	-1.00441	0.06806	0.06776
0.50000	.	-->MOR	.	-3.36790	1.18119	.
0.72222	5.58946	early-Oncorhynchus nerka	0.14908	-0.82657	0.14258	0.17250

# Copper SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 105) data for Vertebrate species exposed to copper in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
20	0.66409	5.09306	0.90511	-0.14014	38.5245	18	0.098954

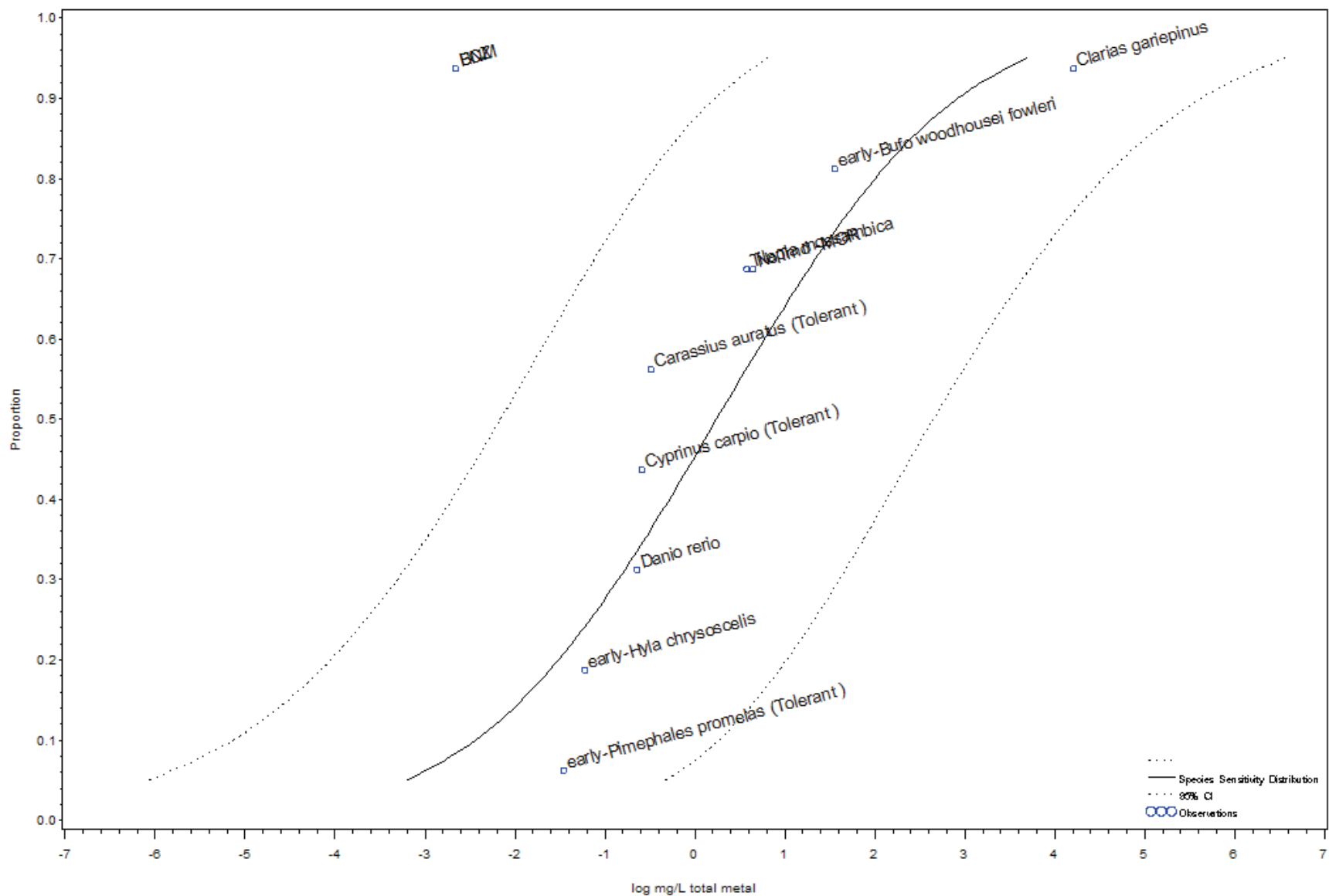
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.002	0.02	0.0003	-2.61699	-1.71373	-3.52024	7.87809
0.10	3.71845	0.009	0.06	0.0011	-2.06992	-1.19035	-2.94949	7.44638
0.20	4.15838	0.039	0.28	0.0054	-1.40747	-0.54924	-2.26570	7.07628
0.25	4.32551	0.070	0.50	0.0098	-1.15580	-0.30345	-2.00814	6.97733
0.30	4.47560	0.118	0.83	0.0167	-0.92979	-0.08164	-1.77793	6.90742
0.50	5.00000	0.724	5.03	0.1043	-0.14014	0.70154	-0.98182	6.80118
0.75	5.67449	7.508	53.44	1.0548	0.87552	1.72787	0.02317	6.97733
0.90	6.28155	61.609	466.89	8.1296	1.78964	2.66922	0.91007	7.44638
0.95	6.64485	217.125	1737.66	27.1303	2.33671	3.23997	1.43346	7.87809

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.425	4.81088	Carassius auratus (Tolerant )	0.28	-0.5572	0.01572	0.02821
0.425	.	-->IMM	.	-1.3665	.	.
0.425	.	-->MOR	.	-1.3665	.	.
0.725	5.59776	Channa punctata	3.00	0.4771	.	.
0.725	.	-->BCM	.	-1.2040	.	.
0.725	.	-->ENZ	.	-1.2040	.	.
0.675	5.45376	Cirrhinus mrigala	1.50	0.1761	.	.
0.975	6.95996	Clarias gariepinus	12909.17	4.1109	0.02487	0.00605
0.975	.	-->NR-LETH -MOR	.	10.0363	0.29233	.
0.975	.	-->NoTrend -MOR	.	8.7116	0.19129	.
0.625	5.31864	Colisa fasciata	1.40	0.1461	0.00000	0.00000
0.625	.	-->BCM	.	0.0000	0.00000	.
0.325	4.54624	Cyprinus carpio (Tolerant )	0.17	-0.7696	.	.
0.375	4.68136	Danio rerio	0.21	-0.6778	.	.
0.475	4.93729	Pimephales promelas (Tolerant )	0.66	-0.1782	0.34628	1.94274
0.475	.	-->EC50 -DVP	.	-1.5223	0.22917	.
0.475	.	-->LOEC -GRO	.	-1.7737	0.08329	.
0.275	4.40224	Poecilia reticulata	0.12	-0.9055	0.06411	0.07080
0.775	5.75542	Tilapia mossambica	3.32	0.5212	0.09573	0.18367
0.775	.	-->BCM	.	0.9787	.	.
0.775	.	-->BEH	.	-2.8134	.	.
0.775	.	-->MOR	.	-0.9174	2.68143	.
0.525	5.06271	Xenopus laevis	0.93	-0.0297	0.02958	0.99632
0.525	.	-->EC50 -DVP	.	-0.2145	0.12252	.
0.525	.	-->LOEC -GRO	.	-0.2877	0.00000	.
0.575	5.18912	early-Ambystoma opacum	1.29	0.1094	0.38602	3.52984
0.925	6.43953	early-Bufo woodhousei fowleri	26.96	1.4307	.	.
0.025	3.04004	early-Cyprinus carpio (Tolerant )	0.00	-2.8239	.	.
0.125	3.84965	early-Hyla chrysoscelis	0.04	-1.3979	.	.
0.875	6.15035	early-Ictalurus punctatus (Intermediate )	7.07	0.8497	0.04077	0.04799
0.825	5.93459	early-Micropterus salmoides (Intermediate )	6.69	0.8257	0.01520	0.01841
0.225	4.24458	early-Morone saxatilis (Intermediate )	0.08	-1.0986	0.23926	0.21779
0.075	3.56047	early-Pimephales promelas (Tolerant )	0.02	-1.7499	0.47500	0.27145
0.075	.	-->NOSIG -GRO	.	-3.0539	0.13768	.
0.075	.	-->NOSIG -MOR	.	-3.5266	0.53094	.
0.175	4.06541	early-Rana pipiens	0.05	-1.2614	0.05599	0.04439

# Copper SSD for Vertebrates - in moderately hard water at T>15C over moderate (1-3 days) exposure





Species Sensitivity Distribution (SSD 106) data for Vertebrate species exposed to copper in moderately hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
8	0.47831	4.88314	0.82681	0.24432	24.6054	6	0.19652

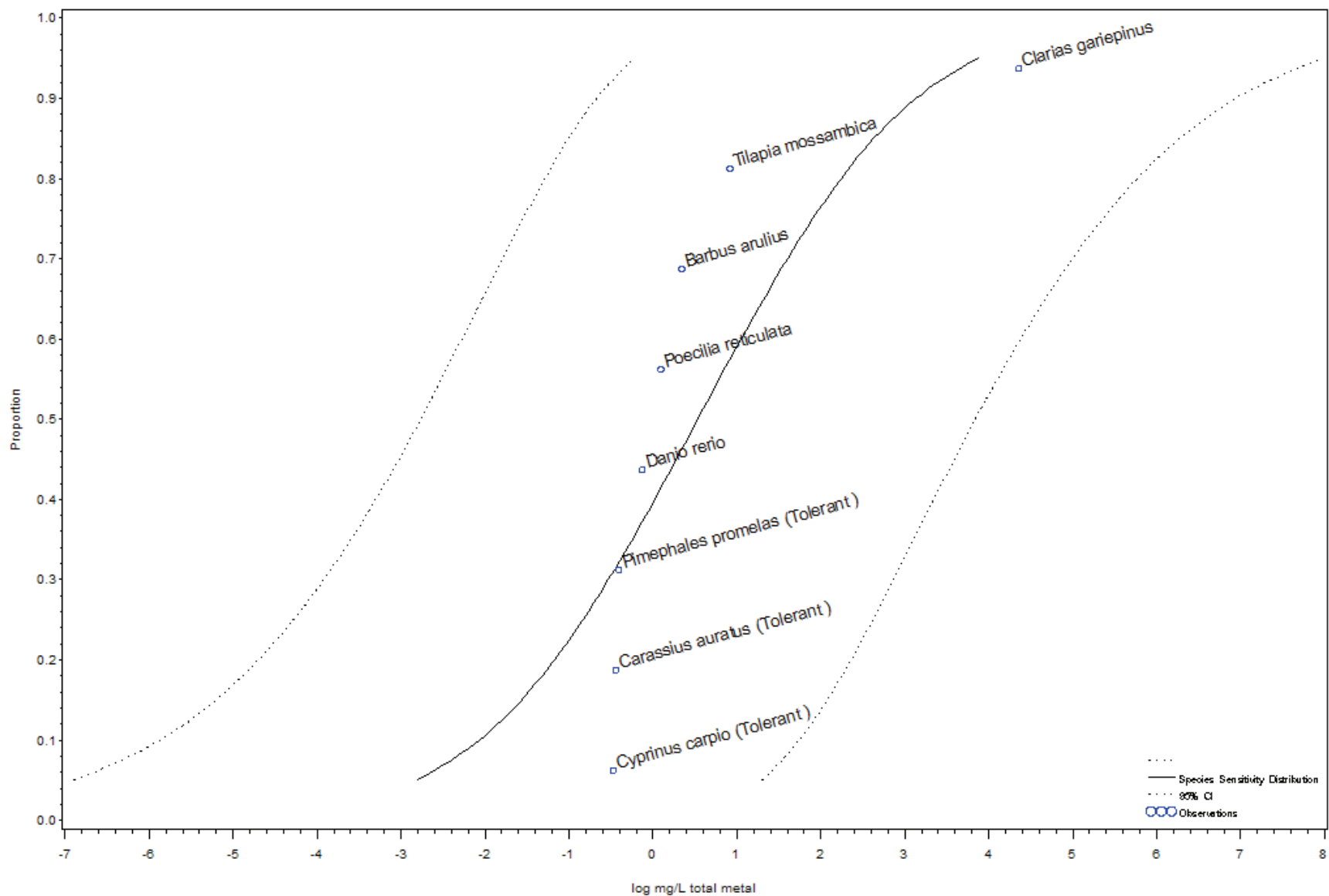
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00	0.12	0.0000	-3.19456	-0.91249	-5.47663	191.451
0.10	3.71845	0.00	0.51	0.0000	-2.43501	-0.29135	-4.57866	139.198
0.20	4.15838	0.03	3.15	0.0003	-1.51525	0.49897	-3.52947	103.318
0.25	4.32551	0.07	6.48	0.0007	-1.16583	0.81181	-3.14347	94.972
0.30	4.47560	0.14	12.57	0.0016	-0.85204	1.09921	-2.80330	89.372
0.50	5.00000	1.76	142.74	0.0216	0.24432	2.15454	-1.66591	81.312
0.75	5.67449	45.13	4286.53	0.4751	1.65446	3.63211	-0.32318	94.972
0.90	6.28155	838.76	116759.93	6.0253	2.92364	5.06729	0.77998	139.198
0.95	6.64485	4821.57	923120.74	25.1836	3.68319	5.96526	1.40112	191.451

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.5625	5.15731	Carassius auratus (Tolerant )	0.33	-0.48560	0.05067	0.10435
0.9375	6.53412	Clarias gariepinus	16220.05	4.21005	0.07859	0.01867
0.9375	.	-->BCM	.	-2.65926	0.00000	.
0.9375	.	-->ENZ	.	-2.65926	.	.
0.4375	4.84269	Cyprinus carpio (Tolerant )	0.26	-0.58503	.	.
0.3125	4.51122	Danio rerio	0.23	-0.63992	0.05354	0.08367
0.6875	5.48878	Tilapia mossambica	3.78	0.57760	0.09624	0.16662
0.6875	.	-->NoTrend -MOR	.	0.64938	0.18636	.
0.8125	5.88715	early-Bufo woodhousei fowleri	35.99	1.55618	.	.
0.1875	4.11285	early-Hyla chrysoscelis	0.06	-1.22185	.	.
0.0625	3.46588	early-Pimephales promelas (Tolerant )	0.03	-1.45690	0.41737	0.28648

# Copper SSD for Vertebrates - in moderately hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 107) data for Vertebrate species exposed to copper in moderately hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
8	0.49309	4.73562	0.65296	0.53618	18.2845	6	0.39380

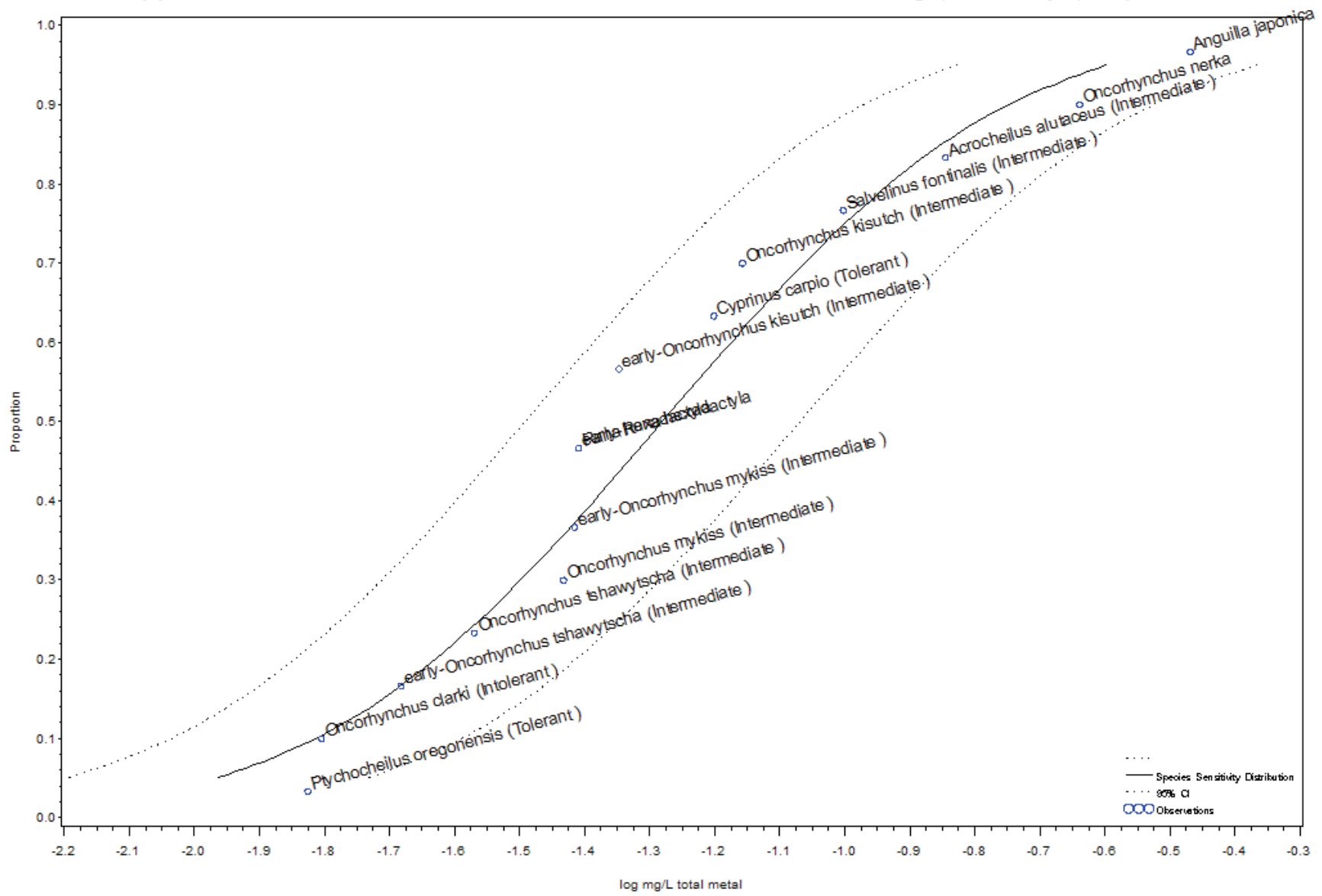
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00	2.86	0.00000	-2.79965	0.45647	-6.05576	1803.49
0.10	3.71845	0.01	9.13	0.00001	-2.06286	0.96033	-5.08605	1054.85
0.20	4.15838	0.07	42.85	0.00011	-1.17066	1.63196	-3.97329	634.78
0.25	4.32551	0.15	80.91	0.00027	-0.83171	1.90802	-3.57145	549.20
0.30	4.47560	0.30	146.84	0.00060	-0.52733	2.16685	-3.22150	494.51
0.50	5.00000	3.44	1442.79	0.00819	0.53618	3.15920	-2.08685	419.78
0.75	5.67449	80.18	44034.91	0.14599	1.90407	4.64380	-0.83567	549.20
0.90	6.28155	1365.24	1440122.85	1.29425	3.13521	6.15840	0.11202	1054.85
0.95	6.64485	7447.29	13431131.17	4.12937	3.87200	7.12811	0.61588	1803.49

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.6875	5.48878	Barbus arulius	2.22	0.34613	0.06432	0.18584
0.1875	4.11285	Carassius auratus (Tolerant )	0.37	-0.43771	.	.
0.1875	.	-->IMM	.	-1.65782	0.35769	.
0.1875	.	-->MOR	.	-1.52330	0.39387	.
0.1875	.	-->NR-LETH -MOR	.	-2.90042	.	.
0.1875	.	-->NoTrend -MOR	.	-1.36649	.	.
0.9375	6.53412	Clarias gariepinus	22950.14	4.36079	0.14911	0.03419
0.0625	3.46588	Cyprinus carpio (Tolerant )	0.34	-0.46852	.	.
0.4375	4.84269	Danio rerio	0.75	-0.12424	0.16954	1.36453
0.3125	4.51122	Pimephales promelas (Tolerant )	0.39	-0.40430	0.20572	0.50883
0.5625	5.15731	Poecilia reticulata	1.25	0.09590	0.11028	1.14992
0.8125	5.88715	Tilapia mossambica	8.34	0.92136	0.20974	0.22764

### Copper SSD for Vertebrates - in soft water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 108) data for Vertebrate species exposed to copper in soft water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
15	2.40989	8.08528	0.95080	-1.28024	2.25389	13	0.052107

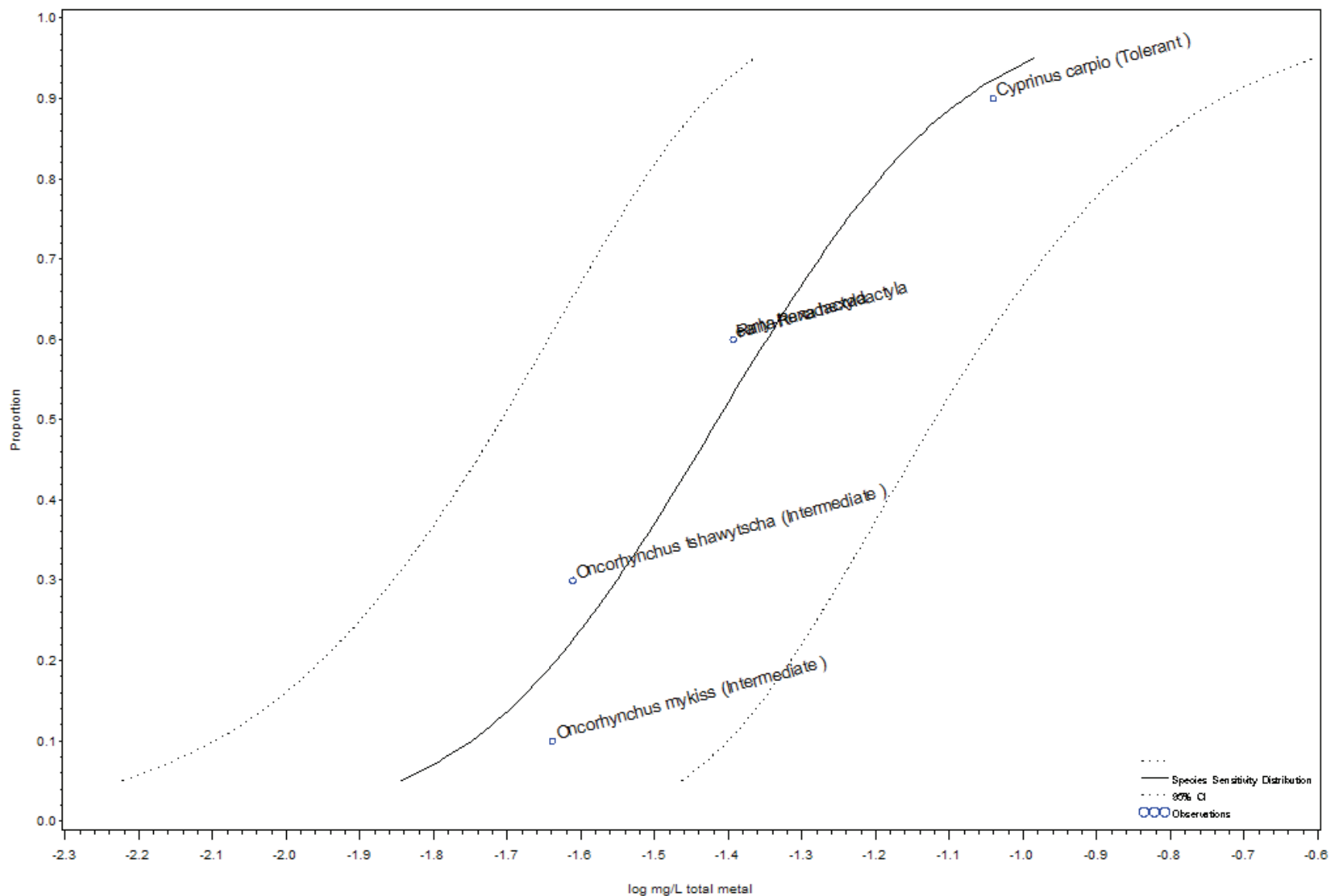
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.01089	0.01685	0.00705	-1.96280	-1.77351	-2.15209	0.89958
0.10	3.71845	0.01542	0.02350	0.01011	-1.81204	-1.62889	-1.99520	0.86868
0.20	4.15838	0.02347	0.03533	0.01559	-1.62949	-1.45190	-1.80708	0.84080
0.25	4.32551	0.02753	0.04130	0.01836	-1.56014	-1.38409	-1.73619	0.83311
0.30	4.47560	0.03178	0.04754	0.02124	-1.49786	-1.32291	-1.67281	0.82762
0.50	5.00000	0.05245	0.07816	0.03520	-1.28026	-1.10701	-1.45350	0.81916
0.75	5.67449	0.09991	0.14986	0.06662	-1.00037	-0.82433	-1.17642	0.83311
0.90	6.28155	0.17846	0.27207	0.11705	-0.74847	-0.56532	-0.93162	0.86868
0.95	6.64485	0.25251	0.39046	0.16330	-0.59771	-0.40843	-0.78700	0.89957

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.83333	5.96742	Acrocheilus alutaceus (Intermediate )	0.14300	-0.84466	.	.
0.96667	6.83391	Anguilla japonica	0.34000	-0.46852	.	.
0.63333	5.34069	Cyprinus carpio (Tolerant )	0.06300	-1.20066	.	.
0.10000	3.71845	Oncorhynchus clarki (Intolerant )	0.01570	-1.80410	.	.
0.70000	5.52440	Oncorhynchus kisutch (Intermediate )	0.06967	-1.15693	0.12443	0.10755
0.70000	.	-->NOEC -NOC	.	-3.57555	0.00000	.
0.70000	.	-->NOSIG -NOC	.	-3.66831	0.46949	.
0.30000	4.47560	Oncorhynchus mykiss (Intermediate )	0.03699	-1.43195	0.37888	0.26459
0.30000	.	-->BCM	.	-5.17567	0.32245	.
0.30000	.	-->CEL	.	-4.08340	.	.
0.30000	.	-->GRO	.	-4.51553	0.61112	.
0.30000	.	-->LETC -MOR	.	-3.45232	0.60619	.
0.30000	.	-->MOR	.	-4.08340	.	.
0.30000	.	-->NOSIG -BCM	.	-4.08340	.	.
0.30000	.	-->NOSIG -IMM	.	-4.08340	.	.
0.30000	.	-->NOSIG -NOC	.	-3.49395	0.35668	.
0.30000	.	-->NoTrend -MOR	.	-4.94766	.	.
0.30000	.	-->PHY	.	-4.19606	1.15542	.
0.90000	6.28155	Oncorhynchus nerka	0.22979	-0.63867	0.04501	0.07048
0.23333	4.27209	Oncorhynchus tshawytscha (Intermediate )	0.02694	-1.56961	0.09473	0.06035
0.03333	3.16609	Ptychocheilus oregonensis (Tolerant )	0.01496	-1.82505	0.16022	0.08779
0.46667	4.91635	Rana hexadactyla	0.03900	-1.40894	.	.
0.76667	5.72791	Salvelinus fontinalis (Intermediate )	0.09950	-1.00218	0.06162	0.06149
0.76667	.	-->IC50 -GRO	.	-1.45382	0.31512	.
0.76667	.	-->LOEC -GRO	.	-1.83887	0.00889	.
0.76667	.	-->LOEC -MOR	.	-1.33535	0.72098	.
0.76667	.	-->MATC -GRO	.	-2.20283	0.01920	.
0.76667	.	-->NOSIG -GRO	.	-2.56429	0.03674	.
0.76667	.	-->NOSIG -MOR	.	-1.87751	1.00799	.
0.56667	5.16789	early-Oncorhynchus kisutch (Intermediate )	0.04500	-1.34679	.	.
0.56667	.	-->GRO	.	-0.68320	.	.
0.36667	4.65931	early-Oncorhynchus mykiss (Intermediate )	0.03846	-1.41498	0.57744	0.40809
0.36667	.	-->MOR	.	-3.29684	.	.
0.16667	4.03258	early-Oncorhynchus tshawytscha (Intermediate )	0.02082	-1.68162	0.06525	0.03880
0.16667	.	-->MOR	.	-1.74870	.	.
0.46667	4.91635	early-Rana hexadactyla	0.03900	-1.40894	.	.

# Copper SSD for Vertebrates - in soft water at T<=15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 109) data for Vertebrate species exposed to copper in soft water at T<=15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	3.83231	10.4192	0.91501	-1.41499	0.22978	3	0.10448

Predicted Values

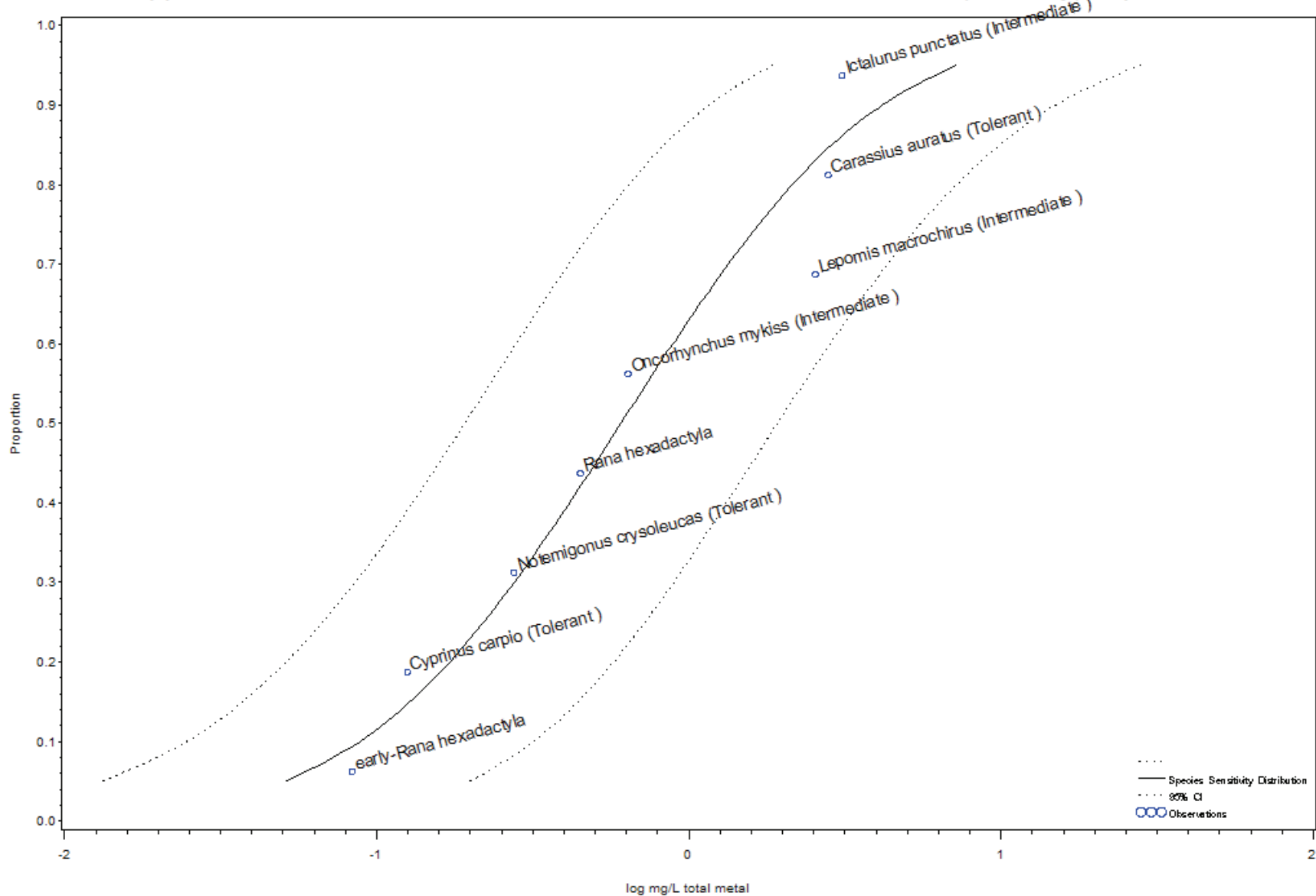
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.01435	0.02737	0.007519	-1.84328	-1.56269	-2.12387	1.38396
0.10	3.71845	0.01785	0.03229	0.009861	-1.74848	-1.49090	-2.00606	1.25699
0.20	4.15838	0.02324	0.03998	0.013514	-1.63368	-1.39814	-1.86922	1.13867
0.25	4.32551	0.02570	0.04356	0.015161	-1.59007	-1.36087	-1.81928	1.10522
0.30	4.47560	0.02812	0.04717	0.016768	-1.55091	-1.32630	-1.77551	1.08106
0.50	5.00000	0.03854	0.06359	0.023361	-1.41407	-1.19663	-1.63151	1.04370
0.75	5.67449	0.05780	0.09803	0.034079	-1.23807	-1.00862	-1.46752	1.10650
0.90	6.28155	0.08324	0.15078	0.045956	-1.07966	-0.82167	-1.33766	1.25922
0.95	6.64485	0.10355	0.19779	0.054208	-0.98486	-0.70379	-1.26594	1.38667

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Cyprinus carpio (Tolerant )	0.091182	-1.04009	0.03086	0.029667
0.1	3.71845	Oncorhynchus mykiss (Intermediate )	0.023000	-1.63827	.	.
0.1	.	-->HIS	.	-0.69315	.	.
0.1	.	-->LT50 -MOR	.	-3.45388	1.62817	.
0.1	.	-->MOR	.	-2.46510	.	.
0.3	4.47560	Oncorhynchus tshawytscha (Intermediate )	0.024495	-1.61092	0.12452	0.077294
0.6	5.25335	Rana hexadactyla	0.040472	-1.39284	0.02276	0.016339
0.6	5.25335	early-Rana hexadactyla	0.040472	-1.39284	0.02276	0.016339



### Copper SSD for Vertebrates - in soft water at T<=15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 110) data for Vertebrate species exposed to copper in soft water at T<=15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
8	1.53279	5.33262	0.92299	-0.21700	2.67469	6	0.087389

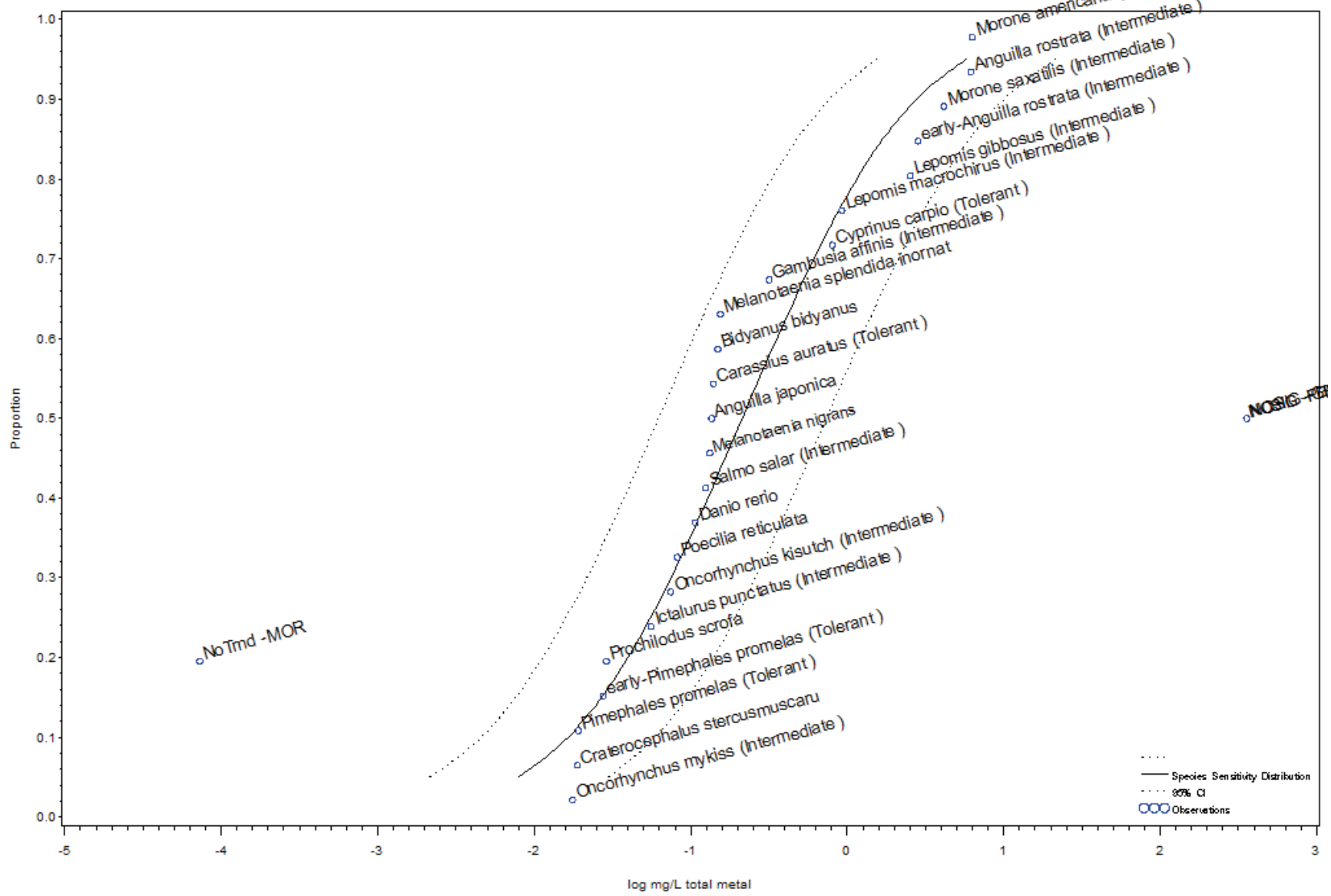
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.05127	0.1504	0.01748	-1.29011	-0.82270	-1.75752	2.59280
0.10	3.71845	0.08849	0.2444	0.03204	-1.05309	-0.61183	-1.49435	2.40021
0.20	4.15838	0.17137	0.4476	0.06561	-0.76608	-0.34914	-1.18301	2.22889
0.25	4.32551	0.22027	0.5663	0.08568	-0.65704	-0.24695	-1.06713	2.18195
0.30	4.47560	0.27598	0.7015	0.10857	-0.55912	-0.15397	-0.96428	2.14847
0.50	5.00000	0.60674	1.5153	0.24294	-0.21700	0.18050	-0.61450	2.09705
0.75	5.67449	1.67124	4.2966	0.65006	0.22304	0.63313	-0.18705	2.18195
0.90	6.28155	4.15996	11.4908	1.50601	0.61909	1.06035	0.17783	2.40021
0.95	6.64485	7.17974	21.0629	2.44736	0.85611	1.32352	0.38870	2.59280

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.8125	5.88715	Carassius auratus (Tolerant )	2.79821	0.44688	0.02194	0.04911
0.1875	4.11285	Cyprinus carpio (Tolerant )	0.12566	-0.90079	0.10014	0.11117
0.9375	6.53412	Ictalurus punctatus (Intermediate )	3.10161	0.49159	0.10835	0.22041
0.6875	5.48878	Lepomis macrochirus (Intermediate )	2.54460	0.40562	0.01086	0.02678
0.3125	4.51122	Notemigonus crysoleucas (Tolerant )	0.27550	-0.55988	0.11086	0.19802
0.5625	5.15731	Oncorhynchus mykiss (Intermediate )	0.63914	-0.19440	0.24343	1.25216
0.5625	.	-->AVO	.	-3.89538	1.88958	.
0.5625	.	-->BCM	.	-0.92420	0.40019	.
0.5625	.	-->CEL	.	-1.76376	.	.
0.5625	.	-->LT50 -MOR	.	1.15129	1.62817	.
0.5625	.	-->PHY	.	-1.64067	0.22033	.
0.4375	4.84269	Rana hexadactyla	0.45000	-0.34679	.	.
0.0625	3.46588	early-Rana hexadactyla	0.08352	-1.07823	0.37980	0.35225

# Copper SSD for Vertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 111) data for Vertebrate species exposed to copper in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
23	1.15140	5.77105	0.91866	-0.66966	15.0831	21	0.084310

Predicted Values

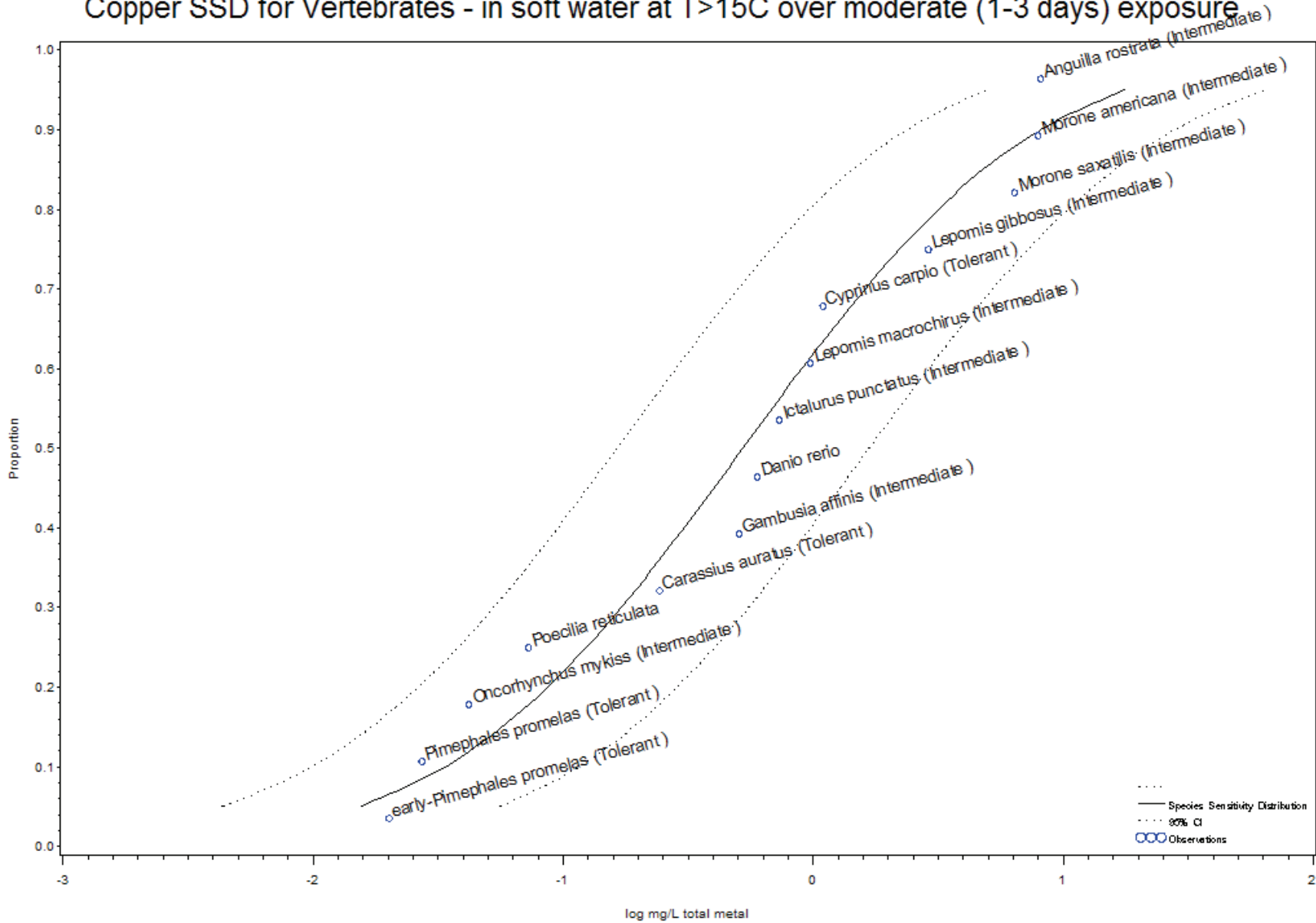
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00798	0.0236	0.00270	-2.09822	-1.62709	-2.56935	2.62097
0.10	3.71845	0.01649	0.0476	0.00571	-1.78269	-1.32230	-2.24308	2.54017
0.20	4.15838	0.03975	0.1122	0.01408	-1.40061	-0.94988	-1.85134	2.46893
0.25	4.32551	0.05553	0.1558	0.01979	-1.25545	-0.80738	-1.70353	2.44955
0.30	4.47560	0.07497	0.2095	0.02684	-1.12510	-0.67892	-1.57128	2.43577
0.50	5.00000	0.21397	0.5938	0.07710	-0.66966	-0.22639	-1.11293	2.41470
0.75	5.67449	0.82440	2.3132	0.29381	-0.08386	0.36422	-0.53194	2.44955
0.90	6.28155	2.77573	8.0124	0.96159	0.44338	0.90376	-0.01701	2.54017
0.95	6.64485	5.73992	16.9840	1.93987	0.75891	1.23004	0.28777	2.62097

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.50000	5.00000	Anguilla japonica	0.13638	-0.86524	0.50432	0.58286
0.50000	.	-->NOSIG -FDB	.	2.55334	.	.
0.50000	.	-->NOSIG -GRO	.	2.55334	.	.
0.50000	.	-->NOSIG -PHY	.	2.55334	.	.
0.93478	6.51239	Anguilla rostrata (Intermediate )	6.19677	0.79217	0.01982	0.02502
0.58696	5.21972	Bidyanus bidyanus	0.14967	-0.82488	0.04101	0.04971
0.54348	5.10920	Carassius auratus (Tolerant )	0.14034	-0.85283	0.35817	0.41998
0.06522	3.48761	Craterocephalus stercusmuscaru	0.01893	-1.72286	0.04591	0.02665
0.71739	5.57511	Cyprinus carpio (Tolerant )	0.80498	-0.09421	0.00381	0.04049
0.36957	4.66699	Danio rerio	0.10733	-0.96927	0.06853	0.07070
0.67391	5.45074	Gambusia affinis (Intermediate )	0.31929	-0.49582	0.66112	1.33339
0.23913	4.29090	Ictalurus punctatus (Intermediate )	0.05602	-1.25169	0.04528	0.03617
0.80435	5.85725	Lepomis gibbosus (Intermediate )	2.54558	0.40579	0.03617	0.08914
0.76087	5.70910	Lepomis macrochirus (Intermediate )	0.92859	-0.03218	0.08287	2.57539

0.76087	.	-->NOSIG -GRO	.	0.39810	.	.
0.76087	.	-->NOSIG -IMM	.	0.39810	.	.
0.76087	.	-->NR-LETH -MOR	.	0.44916	.	.
0.76087	.	-->NoTrend -MOR	.	-0.64626	.	.
0.45652	4.89080	Melanotaenia nigrans	0.13299	-0.87619	0.03865	0.04411
0.63043	5.33301	Melanotaenia splendida inornat	0.15536	-0.80866	0.35784	0.44251
0.97826	7.01909	Morone americana (Intermediate )	6.29921	0.79929	0.00975	0.01220
0.89130	6.23349	Morone saxatilis (Intermediate )	4.14729	0.61776	0.02221	0.03595
0.28261	4.42489	Oncorhynchus kisutch (Intermediate )	0.07478	-1.12622	0.11196	0.09941
0.02174	2.98091	Oncorhynchus mykiss (Intermediate )	0.01763	-1.75363	0.77440	0.44160
0.02174	.	-->BCM	.	-3.83970	.	.
0.02174	.	-->GRO	.	-3.83970	.	.
0.02174	.	-->MOR	.	-3.83970	.	.
0.02174	.	-->PHY	.	-3.83970	.	.
0.10870	3.76651	Pimephales promelas (Tolerant )	0.01917	-1.71741	0.70301	0.40934
0.10870	.	-->GRO	.	-5.02901	0.71881	.
0.10870	.	-->LETC -MOR	.	-4.57303	0.72150	.
0.10870	.	-->LOEC -GRO	.	-4.46999	0.52706	.
0.10870	.	-->LOEC -MOR	.	-4.38203	.	.
0.10870	.	-->MATC -GRO	.	-4.73300	.	.
0.10870	.	-->NOSIG -GRO	.	-5.21600	0.63401	.
0.10870	.	-->NOSIG -MOR	.	-5.06721	.	.
0.32609	4.54926	Poecilia reticulata	0.08225	-1.08487	0.31405	0.28948
0.19565	4.14275	Prochilodus scrofa	0.02900	-1.53760	.	.
0.19565	.	-->NoTrend -MOR	.	-4.13517	.	.
0.41304	4.78028	Salmo salar (Intermediate )	0.12500	-0.90309	.	.
0.84783	6.02715	early-Anguilla rostrata (Intermediate )	2.85096	0.45499	0.07093	0.15590
0.15217	3.97285	early-Pimephales promelas (Tolerant )	0.02783	-1.55547	0.49550	0.31855
0.15217	.	-->NOSIG -GRO	.	-4.09901	0.92912	.
0.15217	.	-->NOSIG -MOR	.	-4.47453	0.39805	.

### Copper SSD for Vertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 112) data for Vertebrate species exposed to copper in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
14	1.07610	5.30200	0.94572	-0.28065	10.4405	12	0.057826

Predicted Values

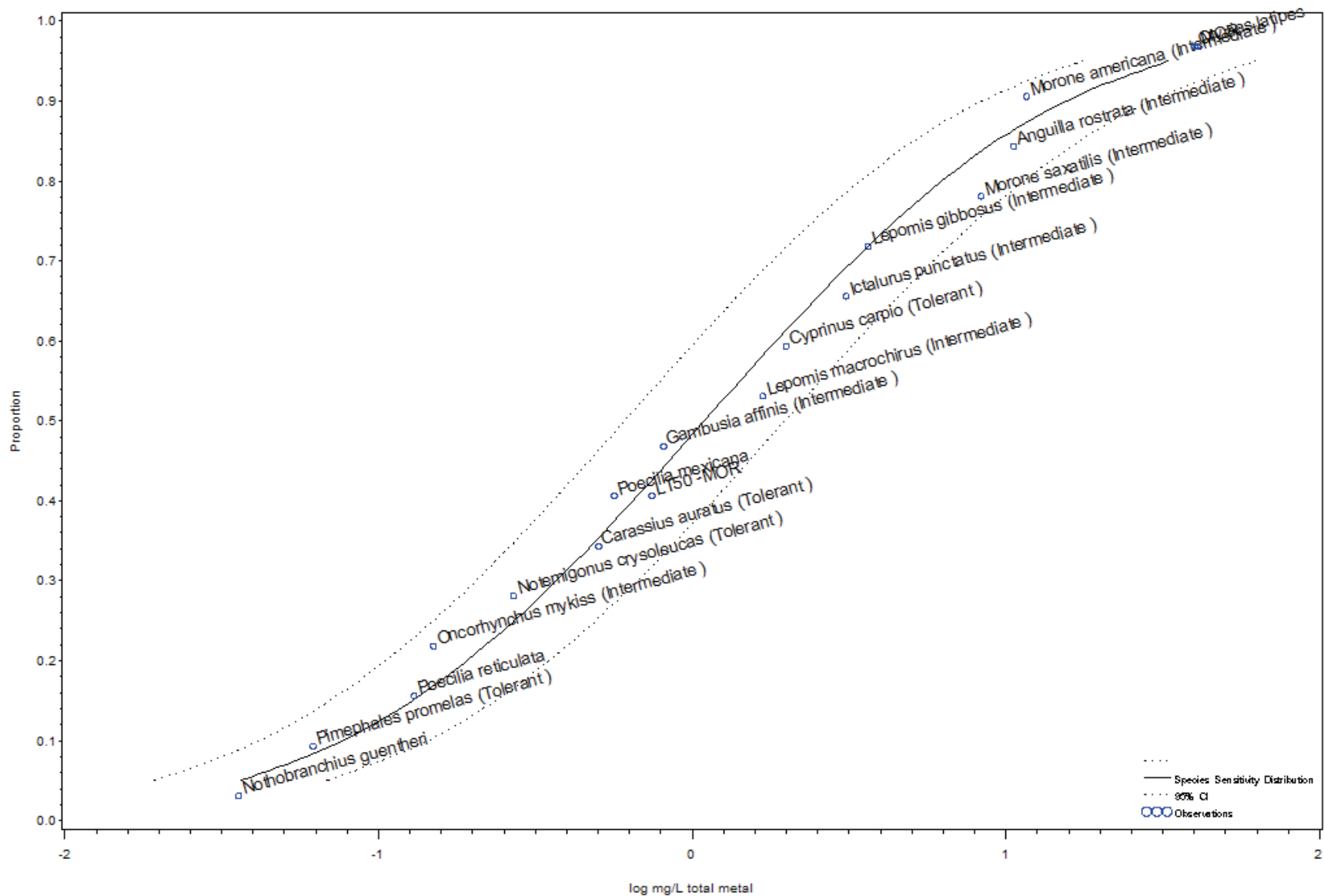
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0155	0.0441	0.00546	-1.80918	-1.35591	-2.26245	2.48754
0.10	3.71845	0.0338	0.0925	0.01233	-1.47157	-1.03396	-1.90918	2.37405
0.20	4.15838	0.0865	0.2294	0.03265	-1.06275	-0.63937	-1.48613	2.27357
0.25	4.32551	0.1238	0.3251	0.04711	-0.90744	-0.48800	-1.32687	2.24616
0.30	4.47560	0.1706	0.4453	0.06538	-0.76796	-0.35135	-1.18457	2.22665
0.50	5.00000	0.5240	1.3540	0.20281	-0.28065	0.13161	-0.69290	2.19676
0.75	5.67449	2.2189	5.8288	0.84472	0.34615	0.76558	-0.07329	2.24616
0.90	6.28155	8.1335	22.2788	2.96938	0.91028	1.34789	0.47267	2.37405
0.95	6.64485	17.6966	50.2528	6.23188	1.24789	1.70116	0.79462	2.48754

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.96429	6.80274	Anguilla rostrata (Intermediate )	8.14985	0.91115	0.00377	0.0041
0.32143	4.53629	Carassius auratus (Tolerant )	0.24358	-0.61336	0.33231	0.5418
0.67857	5.46371	Cyprinus carpio (Tolerant )	1.09545	0.03959	0.05599	1.4142
0.46429	4.91036	Danio rerio	0.60000	-0.22185	.	.
0.39286	4.72812	Gambusia affinis (Intermediate )	0.50571	-0.29610	0.57400	1.9386
0.53571	5.08964	Ictalurus punctatus (Intermediate )	0.73300	-0.13490	.	.
0.53571	.	-->NR-LETH -MOR	.	3.33220	.	.
0.75000	5.67449	Lepomis gibbosus (Intermediate )	2.90000	0.46240	0.00000	0.0000
0.60714	5.27188	Lepomis macrochirus (Intermediate )	0.97714	-0.01004	0.32950	32.8084
0.60714	.	-->PHY	.	0.55962	.	.
0.89286	6.24187	Morone americana (Intermediate )	7.94984	0.90036	0.00386	0.0043
0.82143	5.92082	Morone saxatilis (Intermediate )	6.39687	0.80597	0.01920	0.0238
0.17857	4.07918	Oncorhynchus mykiss (Intermediate )	0.04200	-1.37675	.	.
0.17857	.	-->LT50 -MOR	.	-4.60517	.	.
0.10714	3.75813	Pimephales promelas (Tolerant )	0.02728	-1.56419	0.42588	0.2723
0.10714	.	-->LT50 -MOR	.	-3.83764	1.32940	.
0.25000	4.32551	Poecilia reticulata	0.07300	-1.13668	.	.
0.03571	3.19726	early-Pimephales promelas (Tolerant )	0.02020	-1.69465	.	.



# Copper SSD for Vertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 113) data for Vertebrate species exposed to copper in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
16	1.11176	4.95641	0.98442	0.039208	11.7707	14	0.016450

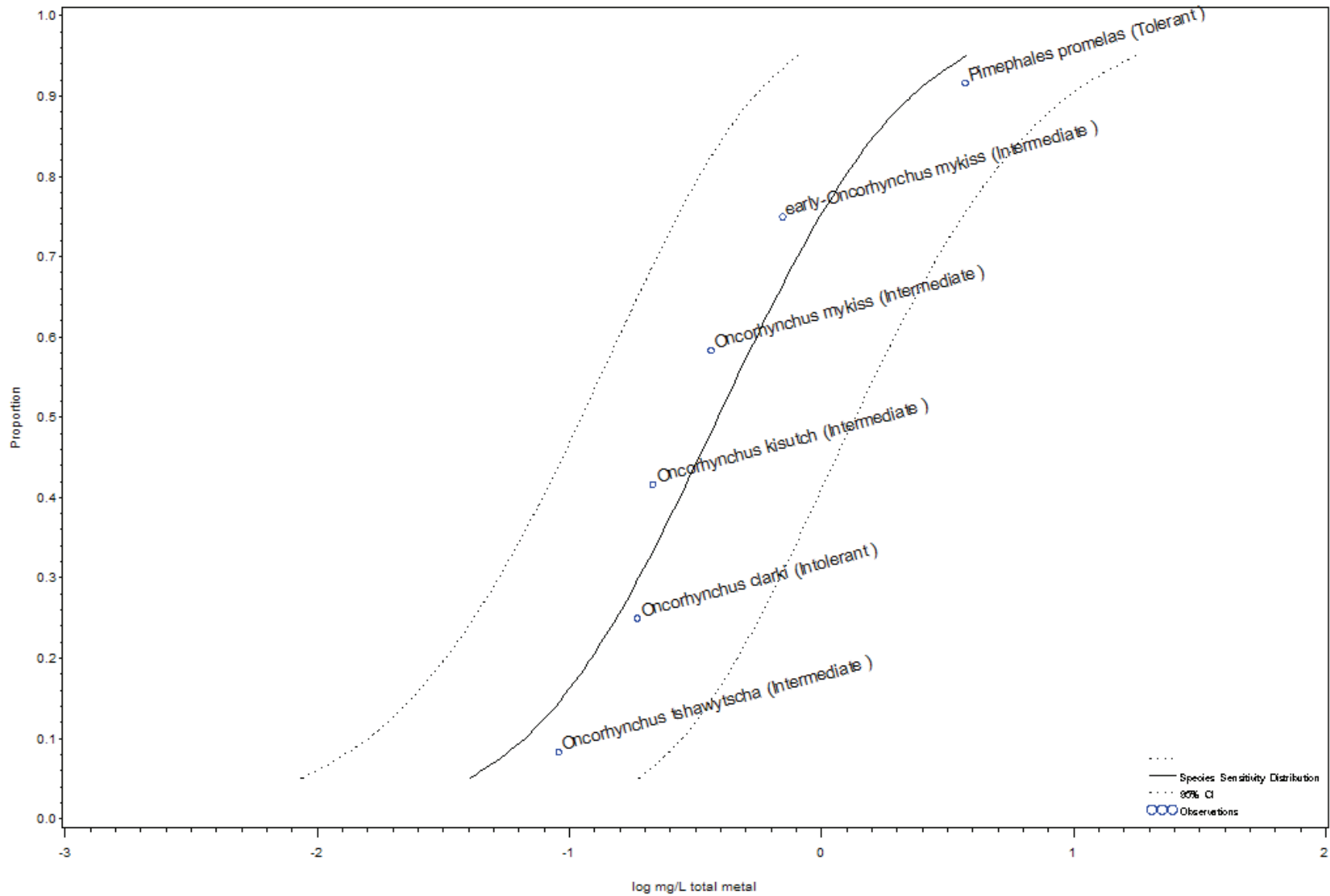
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0363	0.0612	0.0215	-1.44030	-1.21326	-1.66734	1.09384
0.10	3.71845	0.0770	0.1279	0.0464	-1.11352	-0.89323	-1.33381	1.05856
0.20	4.15838	0.1915	0.3136	0.1169	-0.71781	-0.50362	-0.93201	1.02688
0.25	4.32551	0.2707	0.4416	0.1660	-0.56748	-0.35497	-0.77999	1.01816
0.30	4.47560	0.3694	0.6009	0.2271	-0.43248	-0.22118	-0.64378	1.01194
0.50	5.00000	1.0945	1.7728	0.6757	0.03921	0.24866	-0.17024	1.00237
0.75	5.67449	4.4248	7.2178	2.7126	0.64590	0.85841	0.43339	1.01816
0.90	6.28155	15.5574	25.8363	9.3679	1.19194	1.41223	0.97164	1.05856
0.95	6.64485	33.0155	55.6875	19.5739	1.51872	1.74576	1.29168	1.09384

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.84375	6.00999	Anguilla rostrata (Intermediate )	10.6000	1.02531	0.00000	0.00000
0.34375	4.59775	Carassius auratus (Tolerant )	0.5041	-0.29747	0.39220	1.31846
0.34375	.	-->NR-LETH -MOR	.	-0.19179	0.16609	.
0.59375	5.23720	Cyprinus carpio (Tolerant )	1.9975	0.30049	0.03073	0.10228
0.46875	4.92159	Gambusia affinis (Intermediate )	0.8122	-0.09033	0.60170	6.66094
0.65625	5.40225	Ictalurus punctatus (Intermediate )	3.1000	0.49136	.	.
0.71875	5.57913	Lepomis gibbosus (Intermediate )	3.6469	0.56193	0.02525	0.04494
0.53125	5.07841	Lepomis macrochirus (Intermediate )	1.6802	0.22536	0.30485	1.35275
0.90625	6.31801	Morone americana (Intermediate )	11.6490	1.06629	0.00791	0.00742
0.78125	5.77642	Morone saxatilis (Intermediate )	8.3499	0.92168	0.00368	0.00399
0.78125	.	-->BCM	.	-0.96758	.	.
0.78125	.	-->PHY	.	-0.96758	.	.
0.28125	4.42087	Notemigonus crysoleucas (Tolerant )	0.2700	-0.56864	.	.
0.03125	3.13727	Nothobranchius guentheri	0.0359	-1.44521	0.05130	0.03550
0.21875	4.22358	Oncorhynchus mykiss (Intermediate )	0.1500	-0.82391	.	.
0.21875	.	-->GRO	.	-2.64226	.	.
0.21875	.	-->HIS	.	-2.64226	.	.
0.21875	.	-->LT50 -MOR	.	0.00000	2.30259	.
0.21875	.	-->NoTrend -MOR	.	-2.81604	0.26548	.
0.21875	.	-->PHY	.	-2.81341	.	.
0.96875	6.86273	Oryzias latipes	40.0000	1.60206	.	.
0.96875	.	-->MOR	.	1.61044	.	.
0.09375	3.68199	Pimephales promelas (Tolerant )	0.0620	-1.20780	0.33679	0.27884
0.09375	.	-->LT50 -MOR	.	0.46052	1.92648	.
0.40625	4.76280	Poecilia mexicana	0.5653	-0.24772	.	.
0.40625	.	-->LT50 -MOR	.	-0.12783	0.26974	.
0.15625	3.99001	Poecilia reticulata	0.1300	-0.88606	.	.

# Copper SSD for Vertebrates - in very hard water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 114) data for Vertebrate species exposed to copper in very hard water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	1.67148	5.68463	0.92406	-0.40960	1.59546	4	0.091583

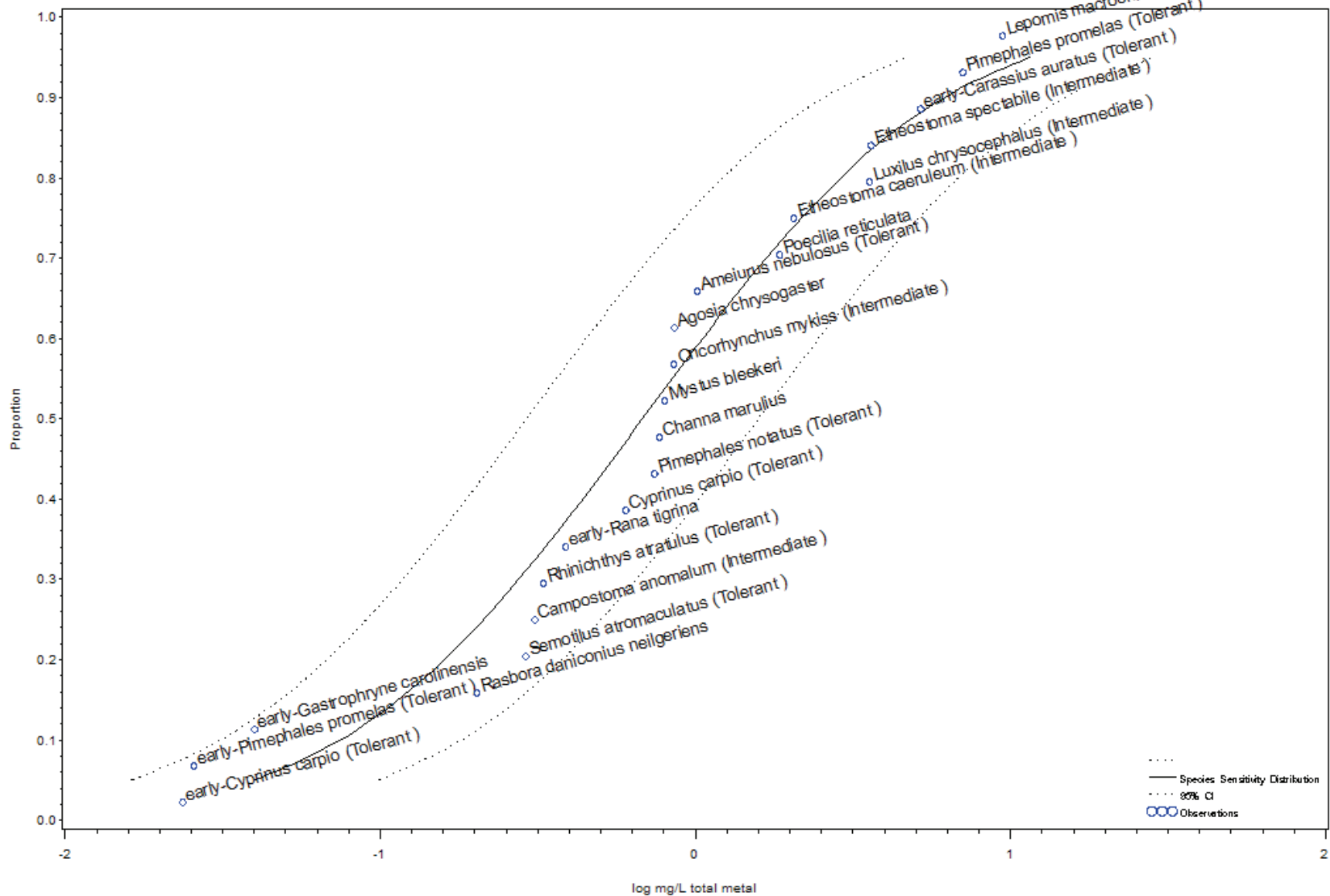
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.04040	0.1319	0.01237	-1.39367	-0.87963	-1.90771	2.96000
0.10	3.71845	0.06663	0.2004	0.02215	-1.17631	-0.69809	-1.65454	2.67517
0.20	4.15838	0.12215	0.3398	0.04390	-0.91312	-0.46872	-1.35751	2.42279
0.25	4.32551	0.15377	0.4184	0.05651	-0.81312	-0.37837	-1.24788	2.35370
0.30	4.47560	0.18909	0.5064	0.07061	-0.72333	-0.29555	-1.15112	2.30441
0.50	5.00000	0.38941	1.0170	0.14911	-0.40960	0.00731	-0.82650	2.22868
0.75	5.67449	0.98613	2.6834	0.36239	-0.00607	0.42869	-0.44082	2.35370
0.90	6.28155	2.27574	6.8446	0.75665	0.35712	0.83535	-0.12111	2.67517
0.95	6.64485	3.75384	12.2607	1.14931	0.57448	1.08851	0.06044	2.96000

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.25000	4.32551	Oncorhynchus clarki (Intolerant )	0.18655	-0.72920	0.23668	0.32457
0.41667	4.78957	Oncorhynchus kisutch (Intermediate )	0.21494	-0.66768	0.01429	0.02140
0.41667	.	-->PHY	.	-2.30259	.	.
0.58333	5.21043	Oncorhynchus mykiss (Intermediate )	0.36569	-0.43689	0.16533	0.37842
0.58333	.	-->NoTrend -MOR	.	-1.38629	.	.
0.08333	3.61701	Oncorhynchus tshawytscha (Intermediate )	0.09089	-1.04148	0.24004	0.23048
0.91667	6.38299	Pimephales promelas (Tolerant )	3.72050	0.57060	0.44567	0.78104
0.75000	5.67449	early-Oncorhynchus mykiss (Intermediate )	0.70321	-0.15292	0.30210	1.97556

# Copper SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 115) data for Vertebrate species exposed to copper in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
22	1.33806	5.22459	0.94867	-0.16785	11.0042	20	0.053299

Predicted Values

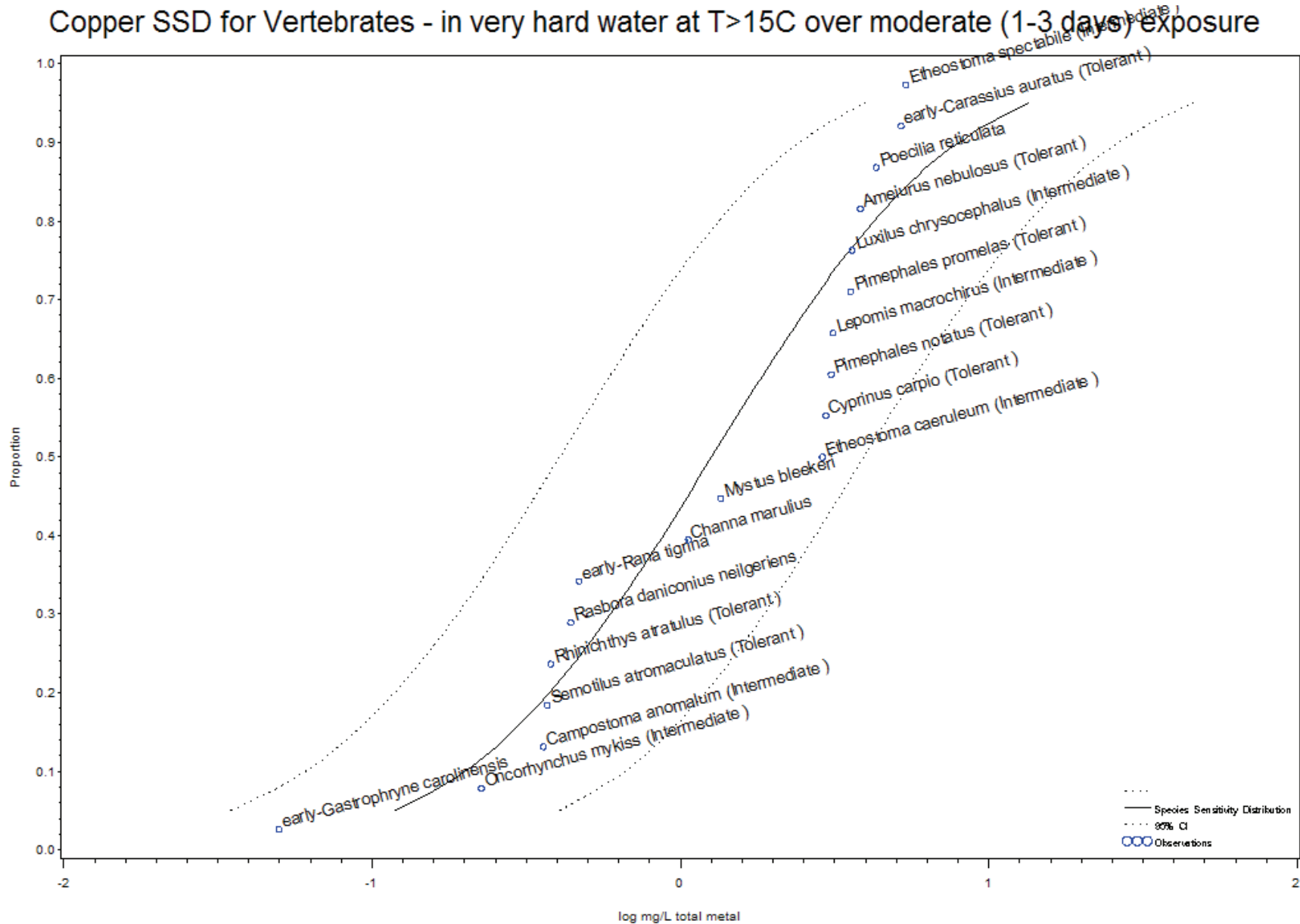
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0401	0.0844	0.01902	-1.39713	-1.07349	-1.72076	1.63221
0.10	3.71845	0.0749	0.1551	0.03616	-1.12561	-0.80945	-1.44178	1.58805
0.20	4.15838	0.1597	0.3256	0.07829	-0.79683	-0.48738	-1.10628	1.54878
0.25	4.32551	0.2129	0.4322	0.10483	-0.67192	-0.36432	-0.97953	1.53804
0.30	4.47560	0.2756	0.5579	0.13613	-0.55976	-0.25346	-0.86605	1.53040
0.50	5.00000	0.6794	1.3691	0.33720	-0.16785	0.13642	-0.47211	1.51867
0.75	5.67449	2.1689	4.4040	1.06814	0.33623	0.64384	0.02863	1.53804
0.90	6.28155	6.1648	12.7670	2.97686	0.78992	1.10609	0.47376	1.58805
0.95	6.64485	11.5196	24.2700	5.46767	1.06144	1.38507	0.73780	1.63221

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.61364	5.28881	Agosia chrysogaster	0.86000	-0.06550	.	.
0.65909	5.40998	Ameiurus nebulosus (Tolerant )	1.01670	0.00719	0.84349	117.238
0.65909	.	-->BCM	.	-3.61192	.	.
0.25000	4.32551	Campostoma anomalum (Intermediate )	0.31000	-0.50864	.	.
0.47727	4.94300	Channa marulius	0.77071	-0.11311	0.09525	0.842
0.38636	4.71119	Cyprinus carpio (Tolerant )	0.60345	-0.21936	0.96878	4.416
0.38636	.	-->ENZ	.	0.75377	.	.
0.38636	.	-->HIS	.	0.75377	.	.
0.75000	5.67449	Etheostoma caeruleum (Intermediate )	2.05273	0.31233	0.67658	2.166
0.84091	5.99820	Etheostoma spectabile (Intermediate )	3.61866	0.55855	0.61555	1.102
0.97727	7.00042	Lepomis macrochirus (Intermediate )	9.46004	0.97589	0.04939	0.051
0.79545	5.82549	Luxilus chrysocephalus (Intermediate )	3.57547	0.55333	0.61518	1.112
0.52273	5.05700	Mystus bleekeri	0.80206	-0.09579	0.02029	0.212
0.56818	5.17175	Oncorhynchus mykiss (Intermediate )	0.85598	-0.06754	0.02135	0.316
0.43182	4.82825	Pimephales notatus (Tolerant )	0.74398	-0.12844	0.75718	5.895
0.93182	6.48947	Pimephales promelas (Tolerant )	7.07200	0.84954	0.56334	0.663
0.70455	5.53752	Poecilia reticulata	1.85632	0.26865	0.26649	0.992
0.15909	4.00180	Rasbora daniconius neilgeriens	0.20300	-0.69250	0.00000	0.000
0.29545	4.46248	Rhinichthys atratulus (Tolerant )	0.33000	-0.48149	.	.
0.20455	4.17451	Semotilus atromaculatus (Tolerant )	0.29000	-0.53760	.	.
0.88636	6.20741	early-Carassius auratus (Tolerant )	5.20000	0.71600	0.00000	0.000
0.02273	2.99958	early-Cyprinus carpio (Tolerant )	0.02366	-1.62591	1.09182	0.672
0.11364	3.79259	early-Gastrophryne carolinensis	0.04000	-1.39794	0.00000	0.000
0.06818	3.51053	early-Pimephales promelas (Tolerant )	0.02569	-1.59023	0.33047	0.208
0.34091	4.59002	early-Rana tigrina	0.38900	-0.41005	.	.



# Copper SSD for Vertebrates - in very hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 116) data for Vertebrate species exposed to copper in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
19	1.60087	4.83762	0.87275	0.10143	6.05243	17	0.13304

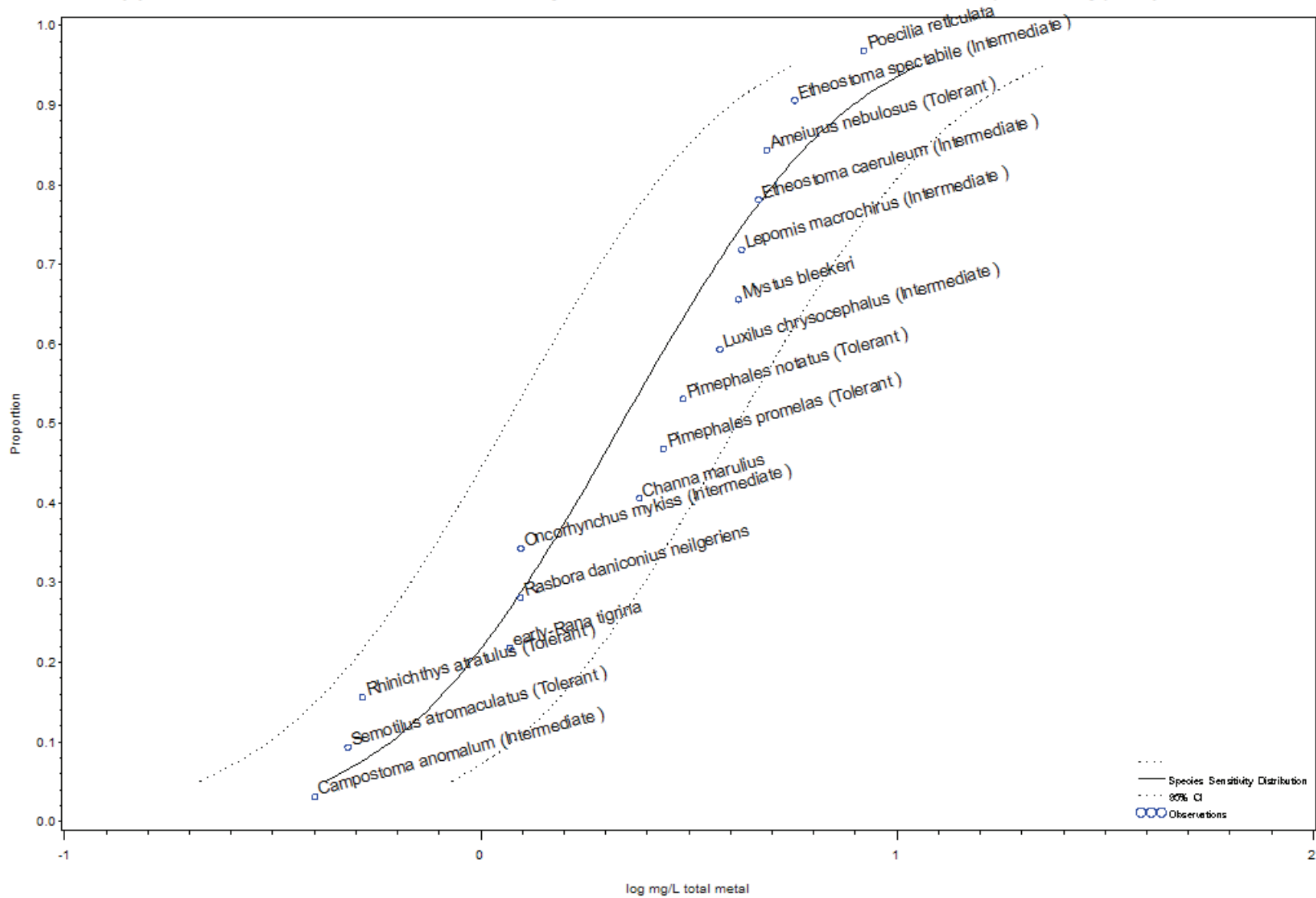
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.1186	0.3258	0.04314	-0.92604	-0.48699	-1.36509	2.38436
0.10	3.71845	0.1999	0.5340	0.07487	-0.69910	-0.27249	-1.12572	2.29619
0.20	4.15838	0.3764	0.9797	0.14465	-0.42429	-0.00892	-0.83967	2.21818
0.25	4.32551	0.4787	1.2370	0.18528	-0.31989	0.09238	-0.73217	2.19691
0.30	4.47560	0.5941	1.5273	0.23110	-0.22614	0.18392	-0.63620	2.18178
0.50	5.00000	1.2631	3.2217	0.49520	0.10143	0.50808	-0.30522	2.15860
0.75	5.67449	3.3324	8.6106	1.28967	0.52276	0.93504	0.11048	2.19691
0.90	6.28155	7.9793	21.3097	2.98778	0.90196	1.32858	0.47535	2.29619
0.95	6.64485	13.4556	36.9791	4.89609	1.12890	1.56796	0.68985	2.38436

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.81579	5.89943	Ameiurus nebulosus (Tolerant )	3.83835	0.58414	0.69905	1.19671
0.13158	3.88104	Campostoma anomalum (Intermediate )	0.36000	-0.44370	.	.
0.39474	4.73301	Channa marulius	1.06200	0.02612	.	.
0.55263	5.13231	Cyprinus carpio (Tolerant )	2.96648	0.47224	0.60931	1.29026
0.50000	5.00000	Etheostoma caeruleum (Intermediate )	2.88738	0.46050	0.81920	1.77891
0.97368	6.93793	Etheostoma spectabile (Intermediate )	5.38918	0.73152	0.67116	0.91748
0.65789	5.40672	Lepomis macrochirus (Intermediate )	3.12662	0.49507	0.54085	1.09247
0.76316	5.71650	Luxilus chrysocephalus (Intermediate )	3.61024	0.55754	0.60909	1.09246
0.44737	4.86769	Mystus bleekeri	1.35350	0.13146	0.13637	1.03737
0.07895	3.58781	Oncorhynchus mykiss (Intermediate )	0.22650	-0.64494	0.10791	0.16732
0.60526	5.26699	Pimephales notatus (Tolerant )	3.08491	0.48924	0.66592	1.36113
0.71053	5.55492	Pimephales promelas (Tolerant )	3.57050	0.55273	0.53742	0.97231
0.86842	6.11896	Poecilia reticulata	4.31463	0.63494	0.35422	0.55788
0.28947	4.44508	Rasbora daniconius neilgeriens	0.44183	-0.35475	0.19226	0.54197
0.23684	4.28350	Rhinichthys atratulus (Tolerant )	0.38000	-0.42022	.	.
0.18421	4.10057	Semotilus atromaculatus (Tolerant )	0.37000	-0.43180	.	.
0.92105	6.41219	early-Carassius auratus (Tolerant )	5.20000	0.71600	.	.
0.02632	3.06207	early-Gastrophryne carolinensis	0.05000	-1.30103	.	.
0.34211	4.59328	early-Rana tigrina	0.47000	-0.32790	.	.

### Copper SSD for Vertebrates - in very hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 117) data for Vertebrate species exposed to copper in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
16	2.31113	4.21655	0.92020	0.33899	2.54610	14	0.084238

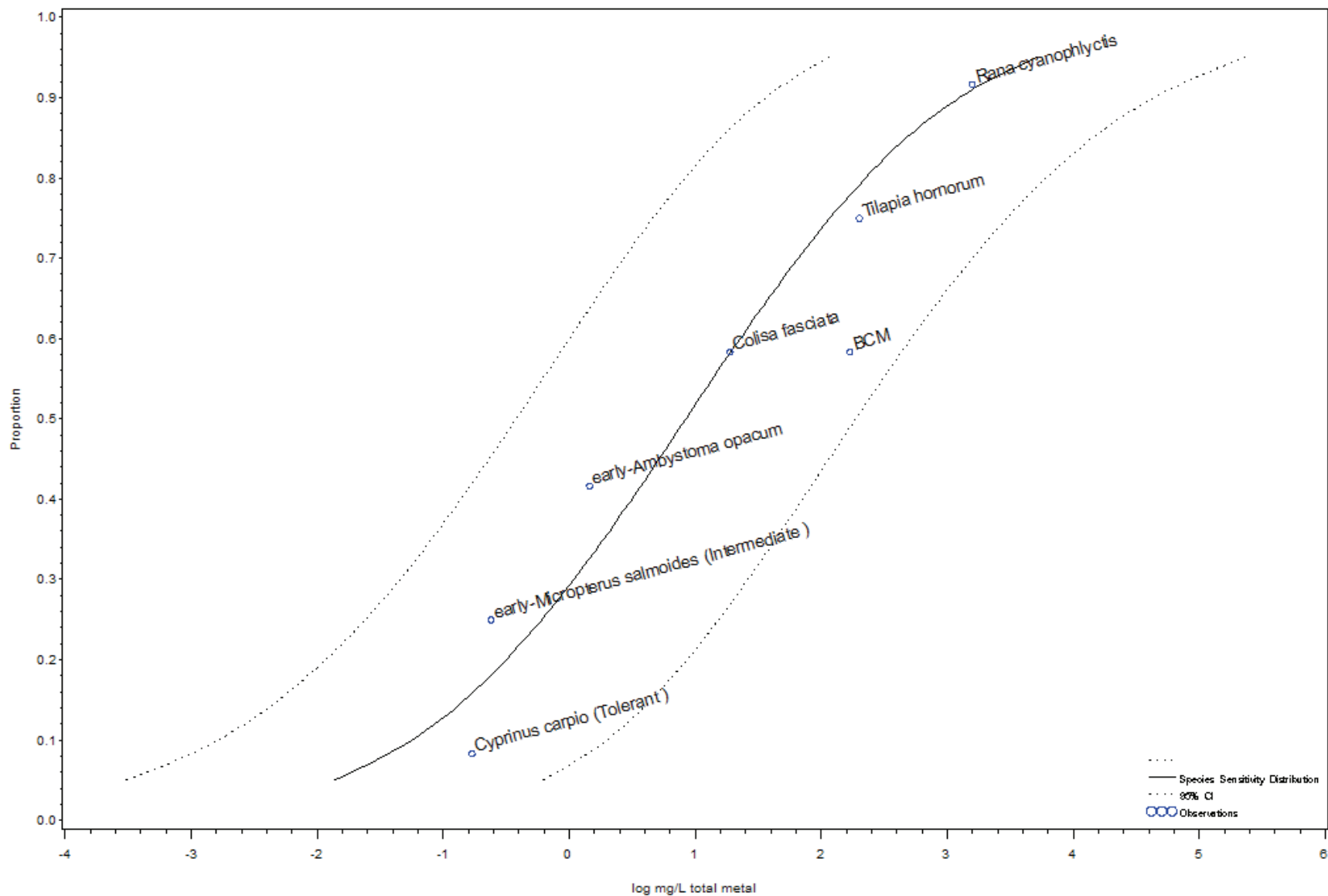
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.4239	0.7511	0.23925	-0.37272	-0.12429	-0.62115	1.20747
0.10	3.71845	0.6088	1.0595	0.34984	-0.21553	0.02508	-0.45613	1.16559
0.20	4.15838	0.9437	1.6156	0.55120	-0.02517	0.20835	-0.25869	1.12797
0.25	4.32551	1.1147	1.8998	0.65401	0.04714	0.27870	-0.18441	1.11761
0.30	4.47560	1.2945	2.1991	0.76195	0.11209	0.34224	-0.11807	1.11022
0.50	5.00000	2.1827	3.6896	1.29119	0.33899	0.56698	0.11099	1.09886
0.75	5.67449	4.2740	7.2843	2.50769	0.63083	0.86239	0.39927	1.11761
0.90	6.28155	7.8253	13.6178	4.49671	0.89350	1.13411	0.65289	1.16559
0.95	6.64485	11.2382	19.9124	6.34264	1.05070	1.29912	0.80227	1.20747

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.84375	6.00999	Ameiurus nebulosus (Tolerant )	4.86914	0.68745	0.76152	1.10775
0.03125	3.13727	Campostoma anomalum (Intermediate )	0.40000	-0.39794	.	.
0.40625	4.76280	Channa marulius	2.40894	0.38183	0.22944	0.60091
0.78125	5.77642	Etheostoma caeruleum (Intermediate )	4.65393	0.66782	0.92459	1.38449
0.90625	6.31801	Etheostoma spectabile (Intermediate )	5.68918	0.75505	0.69809	0.92456
0.71875	5.57913	Lepomis macrochirus (Intermediate )	4.24031	0.62740	0.46058	0.73411
0.71875	.	-->BEH	.	-3.38139	.	.
0.59375	5.23720	Luxilus chrysocephalus (Intermediate )	3.75934	0.57511	0.61158	1.06341
0.65625	5.40225	Mystus bleekeri	4.16341	0.61945	0.01696	0.02738
0.34375	4.59775	Oncorhynchus mykiss (Intermediate )	1.25000	0.09691	.	.
0.53125	5.07841	Pimephales notatus (Tolerant )	3.06525	0.48647	0.69330	1.42518
0.46875	4.92159	Pimephales promelas (Tolerant )	2.75084	0.43947	0.53239	1.21144
0.46875	.	-->LOEC -AVO	.	-3.61192	.	.
0.46875	.	-->NOEC -AVO	.	-4.60517	.	.
0.96875	6.86273	Poecilia reticulata	8.33581	0.92095	0.38095	0.41365
0.28125	4.42087	Rasbora daniconius neilgeriens	1.24783	0.09616	0.26885	2.79599
0.15625	3.99001	Rhinichthys atratulus (Tolerant )	0.52000	-0.28400	.	.
0.09375	3.68199	Semotilus atromaculatus (Tolerant )	0.48000	-0.31876	.	.
0.21875	4.22358	early-Rana tigrina	1.17611	0.07045	0.32486	4.61148

# Lead SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 124) data for Vertebrate species exposed to lead in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	0.59014	4.45319	0.94174	0.92656	13.0438	4	0.070256

Predicted Values

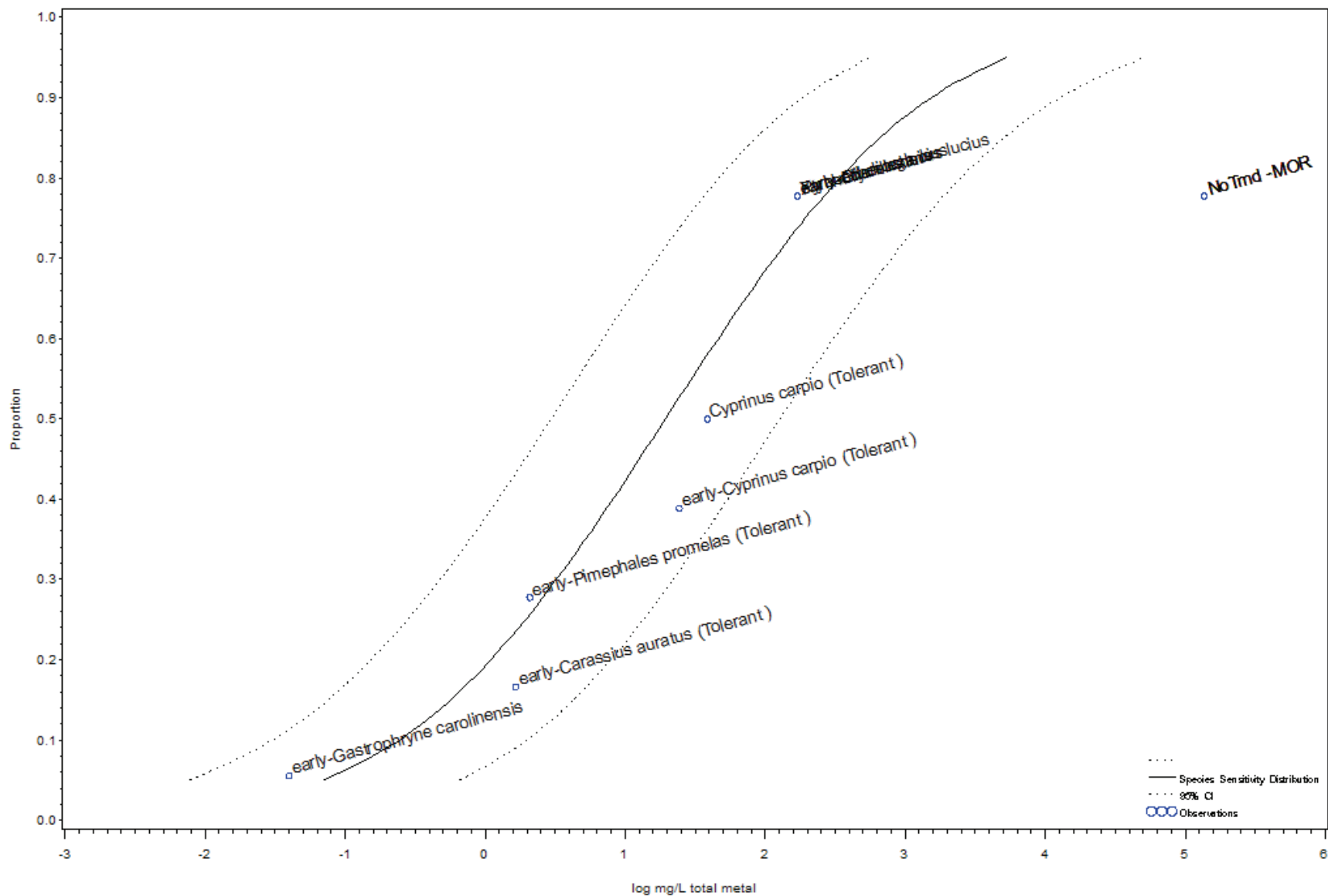
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.01	0.26	0.001	-1.86064	-0.58957	-3.13172	18.6134
0.10	3.71845	0.06	0.87	0.004	-1.24503	-0.06136	-2.42869	15.1983
0.20	4.15838	0.32	4.00	0.025	-0.49956	0.60160	-1.60073	12.5437
0.25	4.32551	0.61	7.27	0.051	-0.21636	0.86133	-1.29405	11.8753
0.30	4.47560	1.09	12.55	0.095	0.03797	1.09867	-1.02274	11.4133
0.50	5.00000	8.44	91.36	0.780	0.92656	1.96078	-0.10765	10.7273
0.75	5.67449	117.35	1403.38	9.813	2.06949	3.14718	0.99180	11.8753
0.90	6.28155	1253.58	19134.48	82.127	3.09815	4.28182	1.91449	15.1983
0.95	6.64485	5173.30	96569.67	277.137	3.71377	4.98484	2.44270	18.6134

Data Summary

Proportion Species CV	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation
0.58333	5.21043	Colisa fasciata	19.00	1.27875	.
0.58333	.	-->BCM	.	2.23001	.
0.08333	3.61701	Cyprinus carpio (Tolerant )	0.17	-0.76955	.
0.08333	.	-->NoTrend -MOR	.	2.63906	.
0.91667	6.38299	Rana cyanophlyctis	1585.84	3.20026	0.017736
.005541920					
0.75000	5.67449	Tilapia hornorum	202.00	2.30535	.
0.41667	4.78957	early-Ambystoma opacum	1.46	0.16435	.
0.25000	4.32551	early-Micropterus salmoides (Intermediate )	0.24	-0.61979	.



# Lead SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 125) data for Vertebrate species exposed to lead in very hard water at T>15C over long (3-30 days) exposure

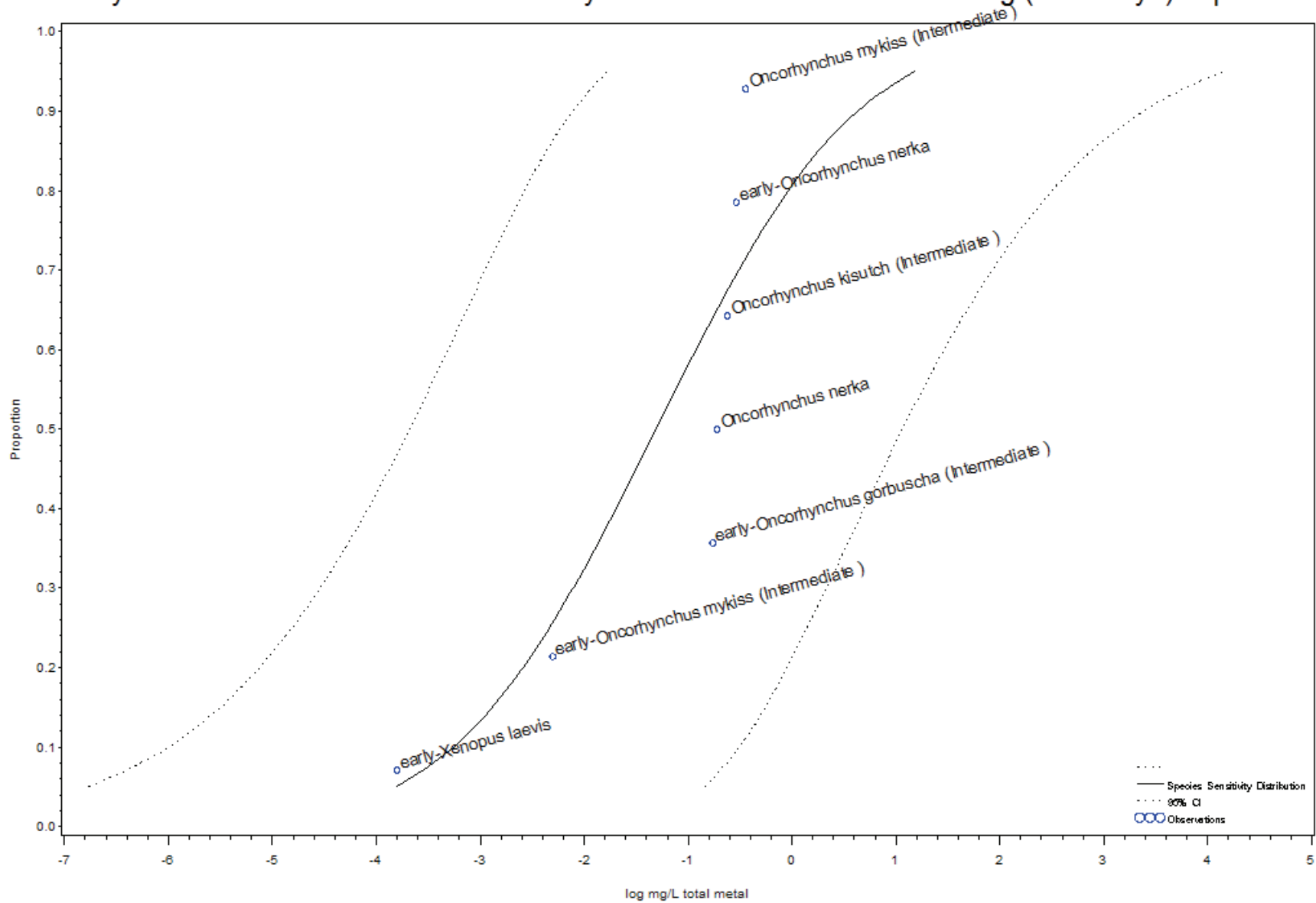
Model Parameters							
Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	0.67505	4.13048	0.94502	1.22661	12.9093	7	0.048896

Predicted Values								
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.07	0.42	0.012	-1.14855	-0.37638	-1.92072	5.74893
0.10	3.71845	0.25	1.31	0.046	-0.61037	0.11669	-1.33743	5.14657
0.20	4.15838	1.10	5.33	0.227	0.04133	0.72678	-0.64413	4.64049
0.25	4.32551	1.94	9.18	0.412	0.28891	0.96283	-0.38501	4.50789
0.30	4.47560	3.25	15.03	0.701	0.51125	1.17698	-0.15449	4.41574
0.50	5.00000	19.41	87.57	4.304	1.28808	1.94233	0.63382	4.28912
0.75	5.67449	193.75	925.93	40.542	2.28724	2.96658	1.60791	4.56975
0.90	6.28155	1536.47	8377.16	281.807	3.18652	3.92310	2.44995	5.26880
0.95	6.64485	5305.27	32237.76	873.072	3.72471	4.50836	2.94105	5.91199

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.50000	5.00000	Cyprinus carpio (Tolerant )	38.663	1.58730	0.22280	0.14037
0.77778	5.76471	Ptychocheilus lucius	170.000	2.23045	0.00000	0.00000
0.77778	.	-->NoTrend -MOR	.	5.13580	.	.
0.77778	5.76471	Xyrauchen texanus	170.000	2.23045	0.00000	0.00000
0.77778	.	-->NoTrend -MOR	.	5.13580	0.00000	.
0.16667	4.03258	early-Carassius auratus (Tolerant )	1.660	0.22011	.	.
0.38889	4.71778	early-Cyprinus carpio (Tolerant )	24.420	1.38775	.	.
0.05556	3.40678	early-Gastrophryne carolinensis	0.040	-1.39794	.	.
0.77778	5.76471	early-Gila elegans	170.000	2.23045	.	.
0.77778	.	-->NoTrend -MOR	.	5.13580	.	.
0.27778	4.41054	early-Pimephales promelas (Tolerant )	2.091	0.32044	0.58259	1.81810
0.77778	5.76471	early-Ptychocheilus lucius	170.000	2.23045	.	.
0.77778	.	-->NoTrend -MOR	.	5.13580	.	.

# Mercury SSD for Vertebrates - in moderately hard water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 134) data for Vertebrate species exposed to mercury in moderately hard water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	0.65964	5.86412	0.72185	-1.30999	9.64725	5	0.32351

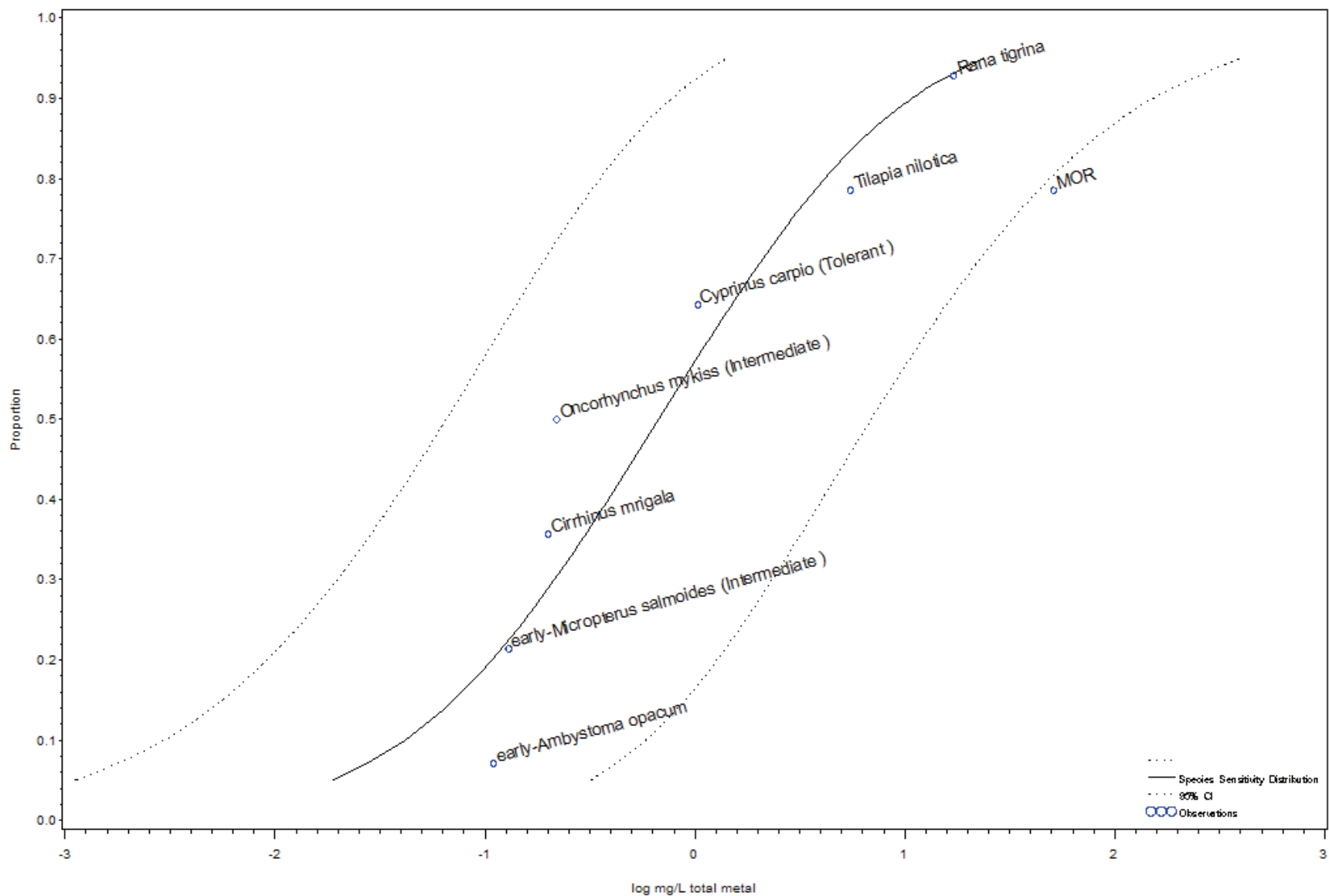
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0002	0.03	0.000001	-3.80356	-1.48067	-6.12645	210.321
0.10	3.71845	0.0006	0.08	0.000004	-3.25280	-1.10077	-5.40483	141.909
0.20	4.15838	0.0026	0.25	0.000027	-2.58588	-0.59603	-4.57573	97.680
0.25	4.32551	0.0047	0.41	0.000053	-2.33251	-0.38899	-4.27603	87.794
0.30	4.47560	0.0079	0.64	0.000097	-2.10498	-0.19503	-4.01492	81.260
0.50	5.00000	0.0490	3.53	0.000680	-1.30999	0.54745	-3.16744	72.005
0.75	5.67449	0.5158	45.29	0.005875	-0.28748	1.65604	-2.23100	87.794
0.90	6.28155	4.2935	609.32	0.030254	0.63281	2.78484	-1.51922	141.909
0.95	6.64485	15.2606	3209.70	0.072557	1.18357	3.50646	-1.13932	210.321

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.64286	5.36611	Oncorhynchus kisutch (Intermediate )	0.24000	-0.61979	.	.
0.92857	6.46523	Oncorhynchus mykiss (Intermediate )	0.36098	-0.44251	0.09614	0.21725
0.92857	.	-->PHY	.	-1.52351	0.19406	.
0.50000	5.00000	Oncorhynchus nerka	0.19245	-0.71568	0.05032	0.07031
0.35714	4.63389	early-Oncorhynchus gorboscha (Intermediate )	0.17347	-0.76078	0.10781	0.14172
0.21429	4.20836	early-Oncorhynchus mykiss (Intermediate )	0.00500	-2.30103	0.00000	0.00000
0.21429	.	-->LT50 -MOR	.	-0.60199	0.85134	.
0.21429	.	-->MOR	.	-2.92280	3.42291	.
0.78571	5.79164	early-Oncorhynchus nerka	0.29221	-0.53430	0.02219	0.04152
0.07143	3.53477	early-Xenopus laevis	0.00016	-3.79588	.	.

# Mercury SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 135) data for Vertebrate species exposed to mercury in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	1.06065	5.18328	0.86890	-0.17280	4.49157	5	0.15248

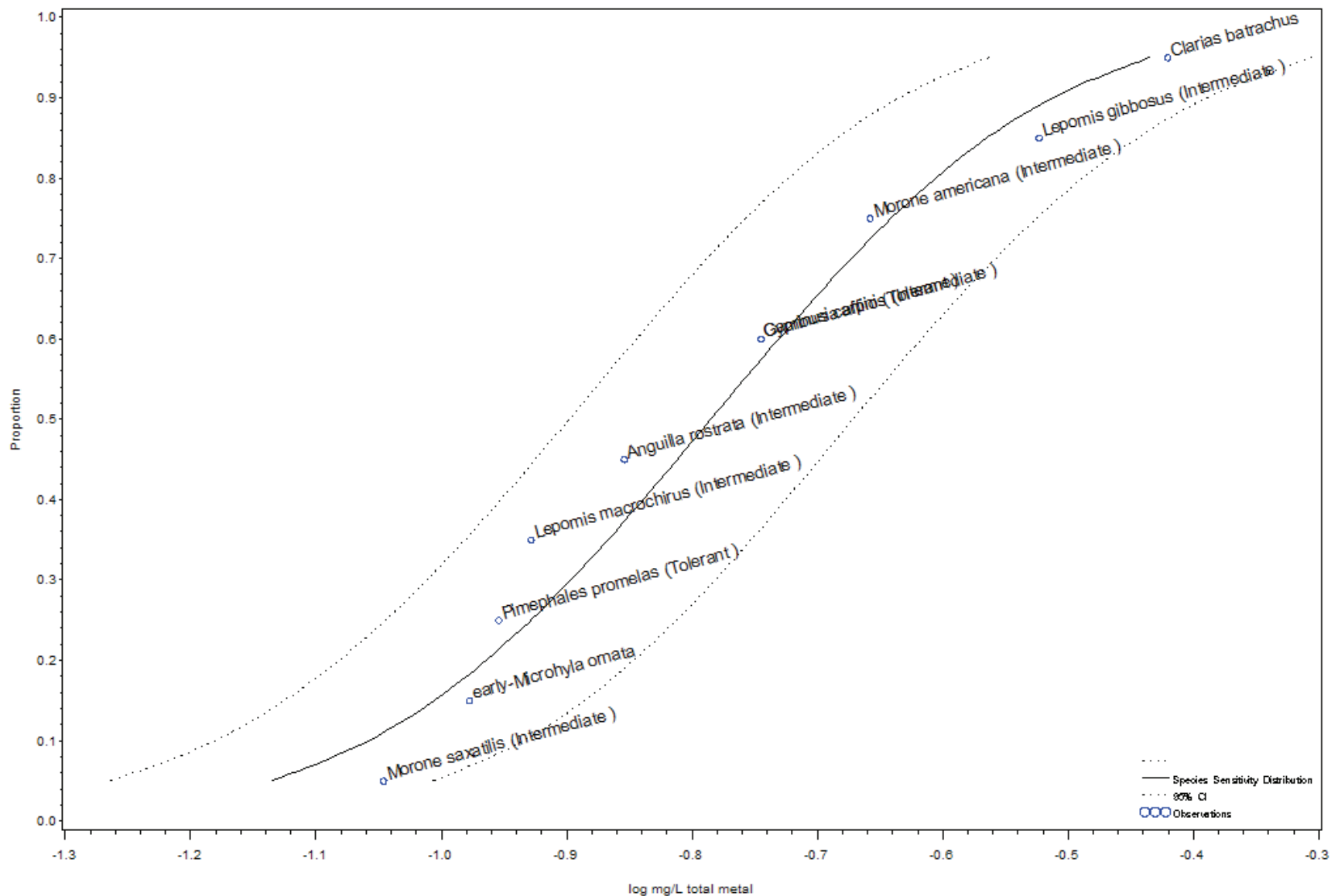
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0189	0.173	0.00207	-1.72361	-0.76254	-2.68468	9.03324
0.10	3.71845	0.0416	0.329	0.00525	-1.38108	-0.48227	-2.27989	7.79529
0.20	4.15838	0.1081	0.748	0.01561	-0.96630	-0.12599	-1.80661	6.77883
0.25	4.32551	0.1553	1.035	0.02331	-0.80873	0.01500	-1.63245	6.51379
0.30	4.47560	0.2152	1.395	0.03319	-0.66722	0.14452	-1.47896	6.32823
0.50	5.00000	0.6717	4.171	0.10817	-0.17280	0.62027	-0.96588	6.04877
0.75	5.67449	2.9048	19.357	0.43591	0.46312	1.28685	-0.36061	6.51379
0.90	6.28155	10.8510	85.957	1.36982	1.03547	1.93428	0.13666	7.79529
0.95	6.64485	23.8781	218.309	2.61174	1.37800	2.33907	0.41693	9.03324

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.35714	4.63389	Cirrhinus mrigala	0.2000	-0.69897	.	.
0.64286	5.36611	Cyprinus carpio (Tolerant )	1.0342	0.01462	0.54672	37.4009
0.64286	.	-->BCM	.	-2.30259	.	.
0.64286	.	-->ENZ	.	-2.30259	0.00000	.
0.64286	.	-->MOR	.	1.48727	.	.
0.64286	.	-->PHY	.	-2.30259	.	.
0.50000	5.00000	Oncorhynchus mykiss (Intermediate )	0.2200	-0.65758	.	.
0.50000	.	-->PHY	.	-0.73397	.	.
0.92857	6.46523	Rana tigrina	17.1648	1.23464	0.03933	0.0319
0.78571	5.79164	Tilapia nilotica	5.5250	0.74233	.	.
0.78571	.	-->MOR	.	1.70928	.	.
0.07143	3.53477	early-Ambystoma opacum	0.1100	-0.95861	.	.
0.21429	4.20836	early-Micropterus salmoides (Intermediate )	0.1300	-0.88606	.	.

### Mercury SSD for Vertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 136) data for Vertebrate species exposed to mercury in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
10	4.69458	8.68445	0.95589	-0.78492	0.38003	8	0.048311

Predicted Values

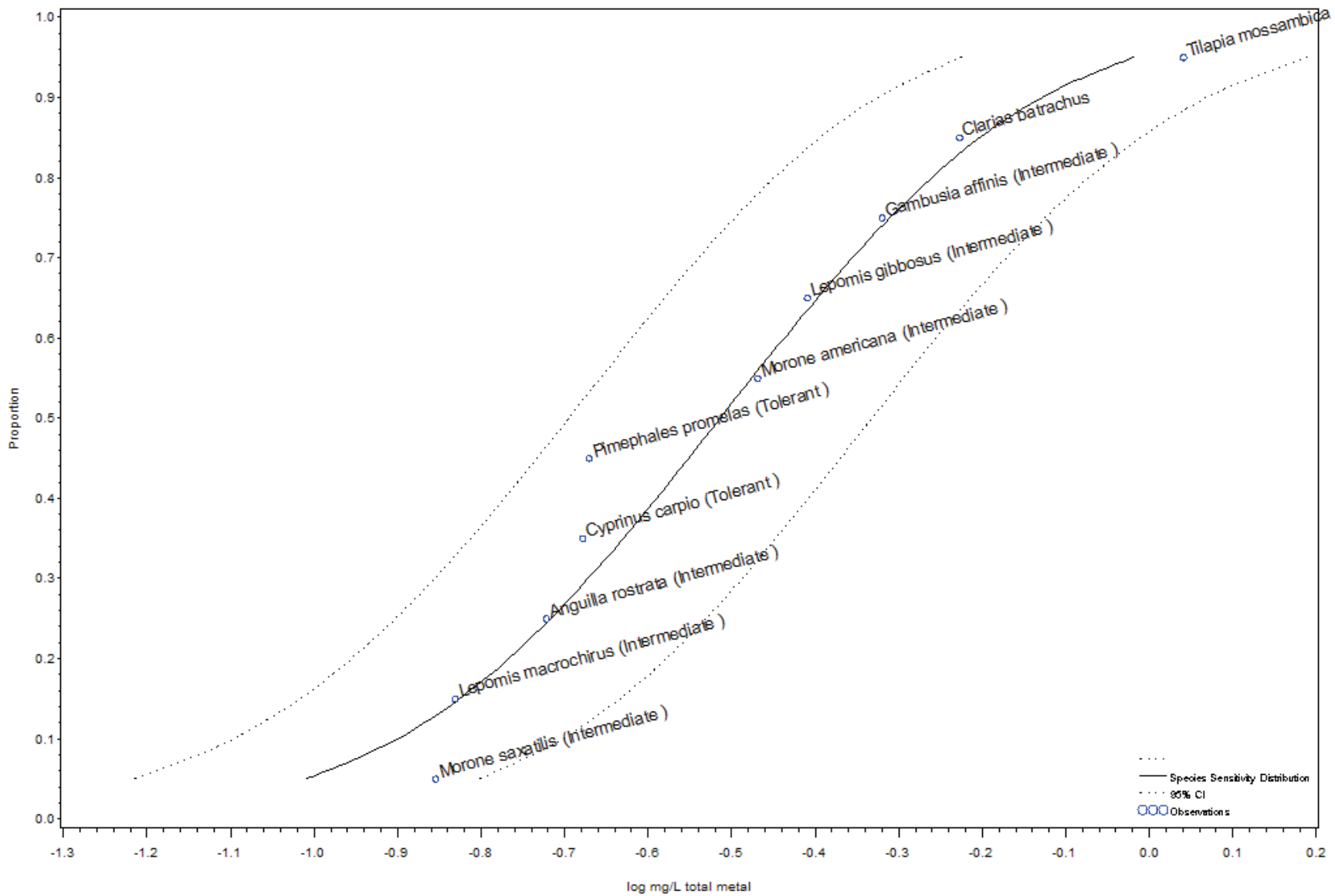
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.07325	0.09304	0.05767	-1.13520	-1.03135	-1.23905	0.48283
0.10	3.71845	0.08754	0.10998	0.06967	-1.05781	-0.95870	-1.15693	0.46040
0.20	4.15838	0.10862	0.13510	0.08733	-0.96410	-0.86935	-1.05886	0.43983
0.25	4.32551	0.11790	0.14623	0.09505	-0.92850	-0.83497	-1.02204	0.43409
0.30	4.47560	0.12690	0.15708	0.10252	-0.89653	-0.80387	-0.98920	0.42997
0.50	5.00000	0.16412	0.20253	0.13300	-0.78483	-0.69352	-0.87614	0.42361
0.75	5.67449	0.22848	0.28339	0.18421	-0.64116	-0.54761	-0.73470	0.43412
0.90	6.28155	0.30772	0.38661	0.24492	-0.51184	-0.41272	-0.61097	0.46045
0.95	6.64485	0.36774	0.46710	0.28952	-0.43446	-0.33059	-0.53832	0.48288

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.45	4.87434	Anguilla rostrata (Intermediate )	0.14000	-0.85387	.	.
0.95	6.64485	Clarias batrachus	0.38000	-0.42022	.	.
0.60	5.25335	Cyprinus carpio (Tolerant )	0.18000	-0.74473	.	.
0.60	5.25335	Gambusia affinis (Intermediate )	0.18000	-0.74473	.	.
0.85	6.03643	Lepomis gibbosus (Intermediate )	0.30000	-0.52288	.	.
0.35	4.61468	Lepomis macrochirus (Intermediate )	0.11800	-0.92812	.	.
0.75	5.67449	Morone americana (Intermediate )	0.22000	-0.65758	.	.
0.05	3.35515	Morone saxatilis (Intermediate )	0.09000	-1.04576	.	.
0.25	4.32551	Pimephales promelas (Tolerant )	0.11117	-0.95400	0.18763	0.19668
0.25	.	-->MOR	.	-3.45388	1.62817	.
0.15	3.96357	early-Microhyla ornata	0.10536	-0.97733	0.11183	0.11443



# Mercury SSD for Vertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 137) data for Vertebrate species exposed to mercury in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
10	3.32273	6.70667	0.94351	-0.51364	0.75185	8	0.062125

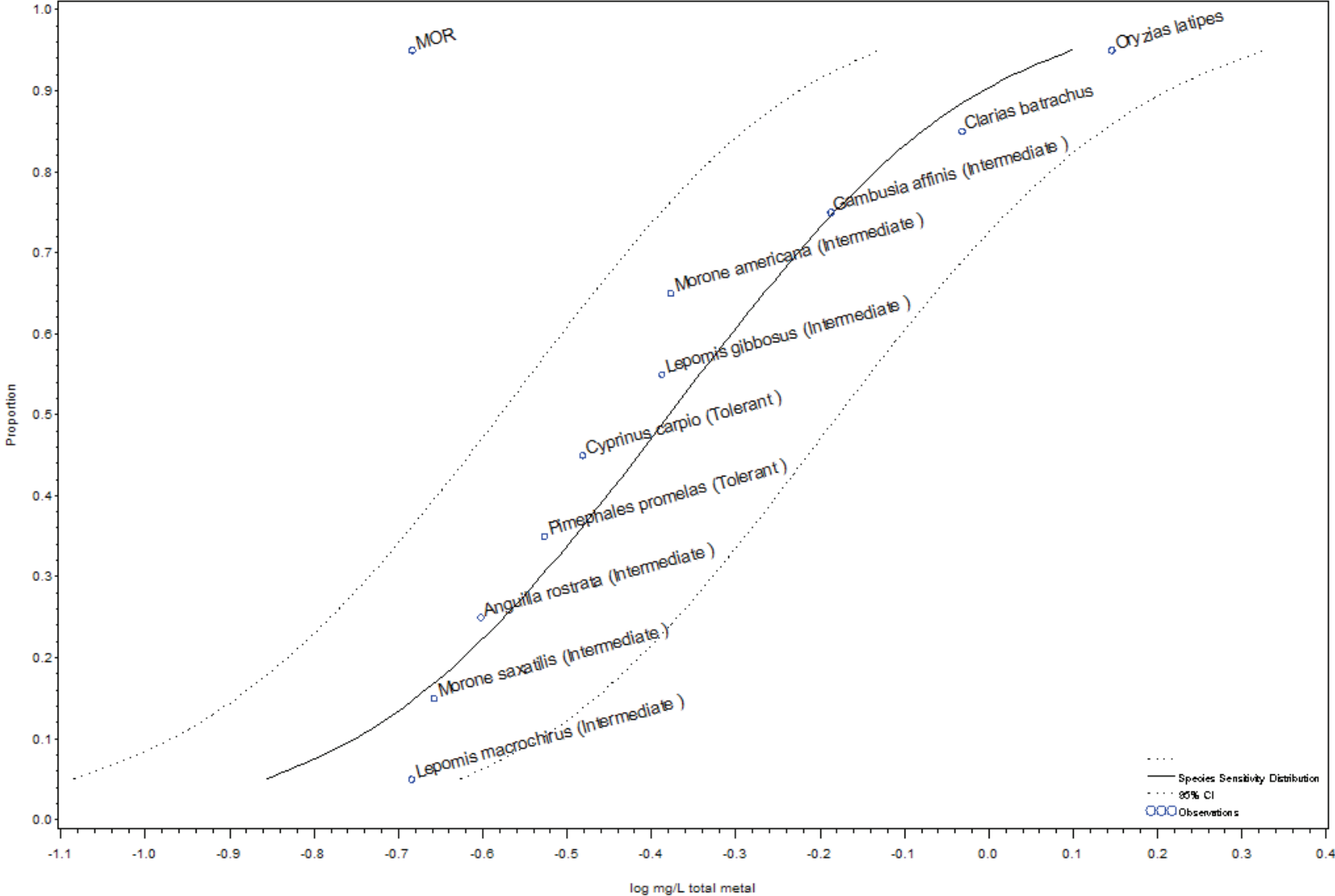
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.09802	0.14385	0.06680	-1.00867	-0.84210	-1.17524	0.78603
0.10	3.71845	0.12609	0.18180	0.08745	-0.89933	-0.74042	-1.05824	0.74826
0.20	4.15838	0.17103	0.24263	0.12056	-0.76693	-0.61506	-0.91880	0.71372
0.25	4.32551	0.19203	0.27119	0.13598	-0.71663	-0.56673	-0.86653	0.70410
0.30	4.47560	0.21308	0.29994	0.15138	-0.67146	-0.52297	-0.81994	0.69720
0.50	5.00000	0.30645	0.42920	0.21881	-0.51364	-0.36734	-0.65994	0.68655
0.75	5.67449	0.48905	0.69065	0.34630	-0.31064	-0.16074	-0.46054	0.70410
0.90	6.28155	0.74483	1.07391	0.51659	-0.12794	0.03097	-0.28686	0.74826
0.95	6.64485	0.95806	1.40593	0.65287	-0.01861	0.14796	-0.18518	0.78603

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.25	4.32551	Anguilla rostrata (Intermediate )	0.19000	-0.72125	.	.
0.85	6.03643	Clarias batrachus	0.59321	-0.22679	0.09283	0.40931
0.35	4.61468	Cyprinus carpio (Tolerant )	0.21000	-0.67778	.	.
0.75	5.67449	Gambusia affinis (Intermediate )	0.47917	-0.31951	0.09575	0.29966
0.65	5.38532	Lepomis gibbosus (Intermediate )	0.39000	-0.40894	.	.
0.15	3.96357	Lepomis macrochirus (Intermediate )	0.14775	-0.83047	0.13809	0.16628
0.55	5.12566	Morone americana (Intermediate )	0.34000	-0.46852	.	.
0.05	3.35515	Morone saxatilis (Intermediate )	0.14000	-0.85387	.	.
0.45	4.87434	Pimephales promelas (Tolerant )	0.21349	-0.67062	0.10991	0.16390
0.45	.	-->LT50 -MOR	.	-3.45388	1.62817	.
0.95	6.64485	Tilapia mossambica	1.10000	0.04139	.	.

Mercury SSD for Vertebrates - in soft water at T>15C over short (<=1 day) exposure



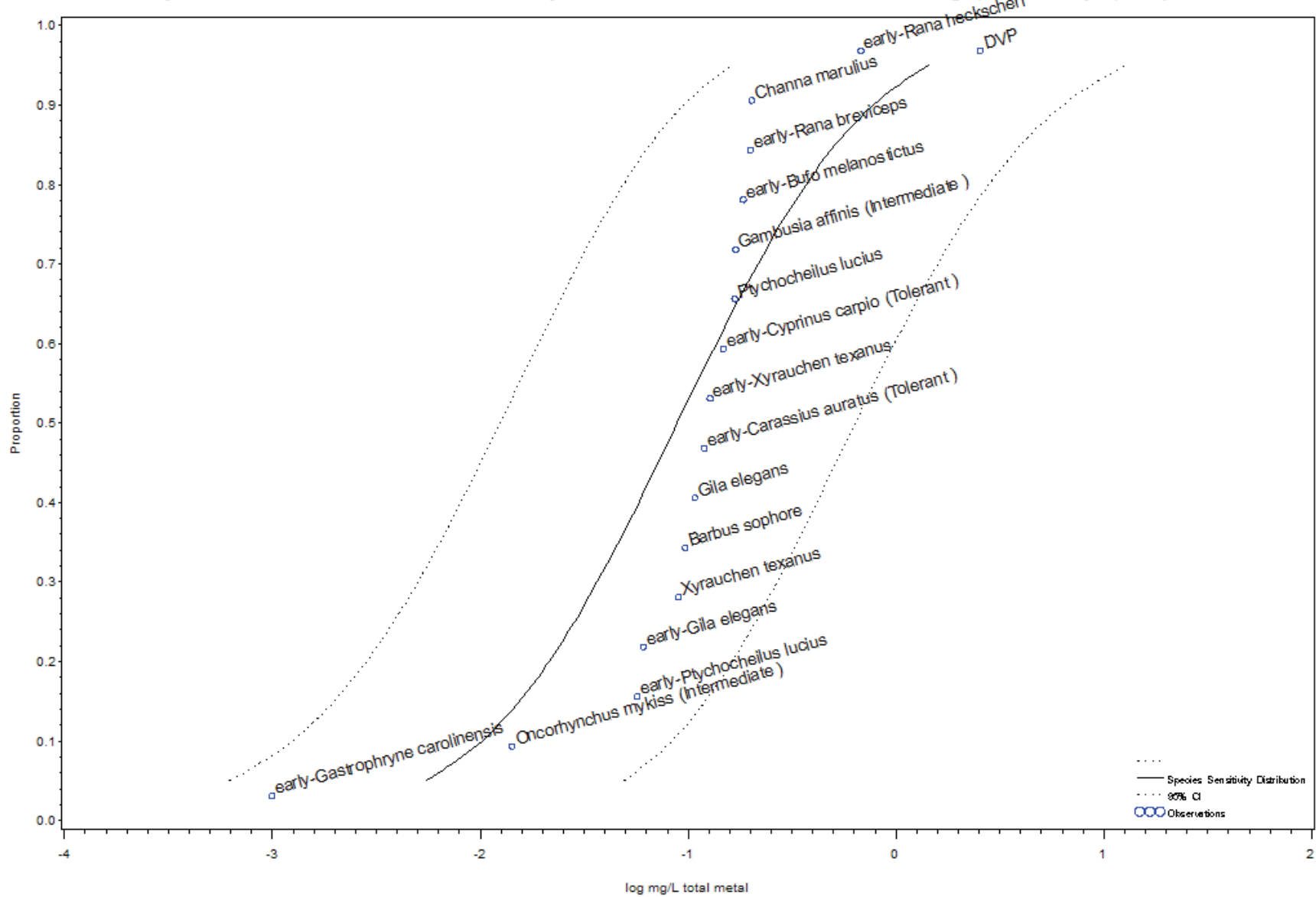
Species Sensitivity Distribution (SSD 138) data for Vertebrate species exposed to mercury in soft water at T>15C over short (<=1 day) exposure

Model Parameters							
Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
10	3.44522	6.30516	0.92569	-0.37883	0.68613	8	0.081722

Predicted Values								
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.13923	0.21301	0.09101	-0.85626	-0.67161	-1.04092	0.87622
0.10	3.71845	0.17750	0.26621	0.11835	-0.75081	-0.57477	-0.92685	0.83307
0.20	4.15838	0.23817	0.35074	0.16173	-0.62312	-0.45501	-0.79122	0.79363
0.25	4.32551	0.26631	0.39019	0.18176	-0.57461	-0.40872	-0.74049	0.78265
0.30	4.47560	0.29441	0.42979	0.20168	-0.53104	-0.36675	-0.69534	0.77477
0.50	5.00000	0.41799	0.60673	0.28797	-0.37883	-0.21700	-0.54066	0.76261
0.75	5.67449	0.65606	0.96124	0.44777	-0.18306	-0.01717	-0.34894	0.78265
0.90	6.28155	0.98435	1.47634	0.65631	-0.00685	0.16919	-0.18289	0.83307
0.95	6.64485	1.25487	1.91979	0.82025	0.09860	0.28325	-0.08606	0.87622

Data Summary						
Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.25	4.32551	Anguilla rostrata (Intermediate )	0.25000	-0.60206	.	.
0.85	6.03643	Clarias batrachus	0.93000	-0.03152	.	.
0.45	4.87434	Cyprinus carpio (Tolerant )	0.33000	-0.48149	.	.
0.75	5.67449	Gambusia affinis (Intermediate )	0.65000	-0.18709	.	.
0.55	5.12566	Lepomis gibbosus (Intermediate )	0.41000	-0.38722	.	.
0.05	3.35515	Lepomis macrochirus (Intermediate )	0.20700	-0.68403	.	.
0.65	5.38532	Morone americana (Intermediate )	0.42000	-0.37675	.	.
0.15	3.96357	Morone saxatilis (Intermediate )	0.22000	-0.65758	.	.
0.95	6.64485	Oryzias latipes	1.40000	0.14613	.	.
0.95	.	-->MOR	.	-0.68320	.	.
0.35	4.61468	Pimephales promelas (Tolerant )	0.29736	-0.52671	0.08062	0.15306
0.35	.	-->LT50 -MOR	.	1.15129	1.32940	.

# Mercury SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 139) data for Vertebrate species exposed to mercury in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
16	1.36163	6.43043	0.73802	-1.05053	5.88288	14	0.27656

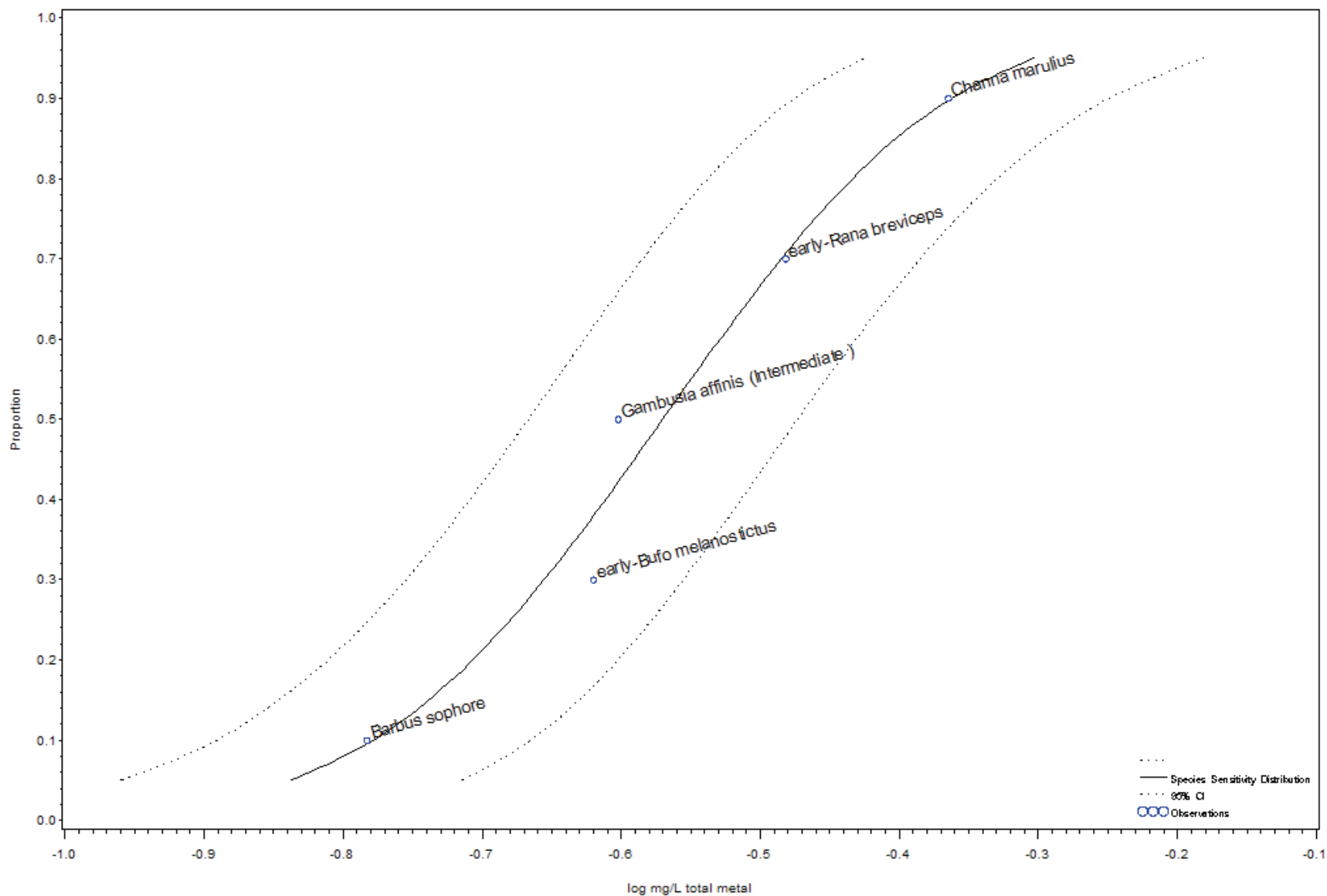
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00551	0.03313	0.00092	-2.25853	-1.47978	-3.03728	5.84183
0.10	3.71845	0.01019	0.05721	0.00182	-1.99172	-1.24249	-2.74095	5.43530
0.20	4.15838	0.02145	0.11315	0.00407	-1.66863	-0.94633	-2.39093	5.08639
0.25	4.32551	0.02845	0.14755	0.00549	-1.54588	-0.83107	-2.26070	4.99300
0.30	4.47560	0.03667	0.18785	0.00716	-1.43566	-0.72620	-2.14512	4.92700
0.50	5.00000	0.08902	0.44736	0.01771	-1.05053	-0.34934	-1.75172	4.82662
0.75	5.67449	0.27850	1.44425	0.05370	-0.55518	0.15964	-1.26999	4.99300
0.90	6.28155	0.77743	4.36403	0.13849	-0.10934	0.63989	-0.85857	5.43530
0.95	6.64485	1.43705	8.63420	0.23918	0.15747	0.93622	-0.62128	5.84183

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.34375	4.59775	Barbus sophore	0.09708	-1.01286	0.24639	0.24327
0.90625	6.31801	Channa marulius	0.20282	-0.69290	0.26846	0.38744
0.71875	5.57913	Gambusia affinis (Intermediate )	0.17000	-0.76955	.	.
0.40625	4.76280	Gila elegans	0.10800	-0.96658	.	.
0.09375	3.68199	Oncorhynchus mykiss (Intermediate )	0.01428	-1.84527	0.04570	0.02477
0.65625	5.40225	Ptychocheilus lucius	0.16800	-0.77469	.	.
0.28125	4.42087	Xyrauchen texanus	0.09000	-1.04576	.	.
0.78125	5.77642	early-Bufo melanostictus	0.18500	-0.73283	.	.
0.46875	4.92159	early-Carassius auratus (Tolerant )	0.12000	-0.92082	.	.
0.59375	5.23720	early-Cyprinus carpio (Tolerant )	0.14819	-0.82918	0.44333	0.53466
0.03125	3.13727	early-Gastrophryne carolinensis	0.00100	-3.00000	.	.
0.21875	4.22358	early-Gila elegans	0.06100	-1.21467	.	.
0.15625	3.99001	early-Ptychocheilus lucius	0.05700	-1.24413	.	.
0.84375	6.00999	early-Rana breviceps	0.20000	-0.69897	.	.
0.96875	6.86273	early-Rana heckscheri	0.68000	-0.16749	.	.
0.96875	.	-->DVP	.	0.40547	.	.
0.53125	5.07841	early-Xyrauchen texanus	0.12800	-0.89279	.	.

# Mercury SSD for Vertebrates - in very hard water at T>15C over moderate (1-3 days) exposure





Species Sensitivity Distribution (SSD 140) data for Vertebrate species exposed to mercury in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	6.16050	8.51194	0.97709	-0.57007	0.098728	3	0.029279

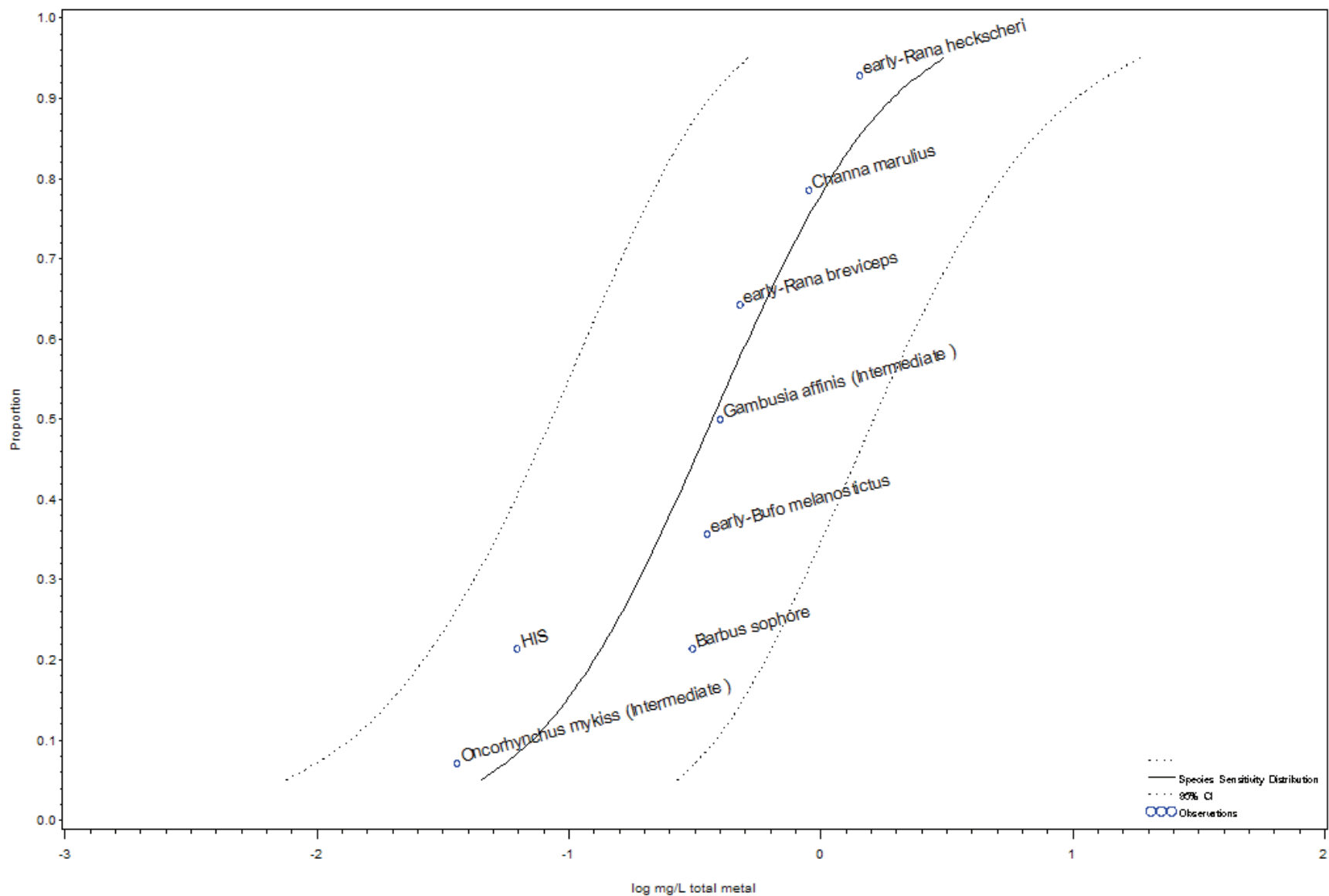
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.14552	0.17929	0.11811	-0.83707	-0.74645	-0.92770	0.42037
0.10	3.71845	0.16669	0.20210	0.13748	-0.77810	-0.69443	-0.86177	0.38769
0.20	4.15838	0.19648	0.23461	0.16454	-0.70669	-0.62965	-0.78373	0.35664
0.25	4.32551	0.20914	0.24865	0.17591	-0.67956	-0.60442	-0.75470	0.34776
0.30	4.47560	0.22121	0.26216	0.18666	-0.65520	-0.58143	-0.72896	0.34132
0.50	5.00000	0.26911	0.31734	0.22820	-0.57007	-0.49847	-0.64168	0.33125
0.75	5.67449	0.34627	0.41167	0.29125	-0.46059	-0.38545	-0.53573	0.34776
0.90	6.28155	0.43446	0.52677	0.35833	-0.36205	-0.27838	-0.44571	0.38769
0.95	6.64485	0.49765	0.61313	0.40393	-0.30307	-0.21245	-0.39370	0.42037

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.1	3.71845	Barbus sophero	0.165	-0.78252	.	.
0.9	6.28155	Channa marulius	0.432	-0.36452	.	.
0.5	5.00000	Gambusia affinis (Intermediate )	0.250	-0.60206	.	.
0.3	4.47560	early-Bufo melanostictus	0.240	-0.61979	.	.
0.7	5.52440	early-Rana breviceps	0.330	-0.48149	.	.

# Mercury SSD for Vertebrates - in very hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 141) data for Vertebrate species exposed to mercury in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	1.79324	5.77105	0.85033	-0.42998	1.53773	5	0.17407

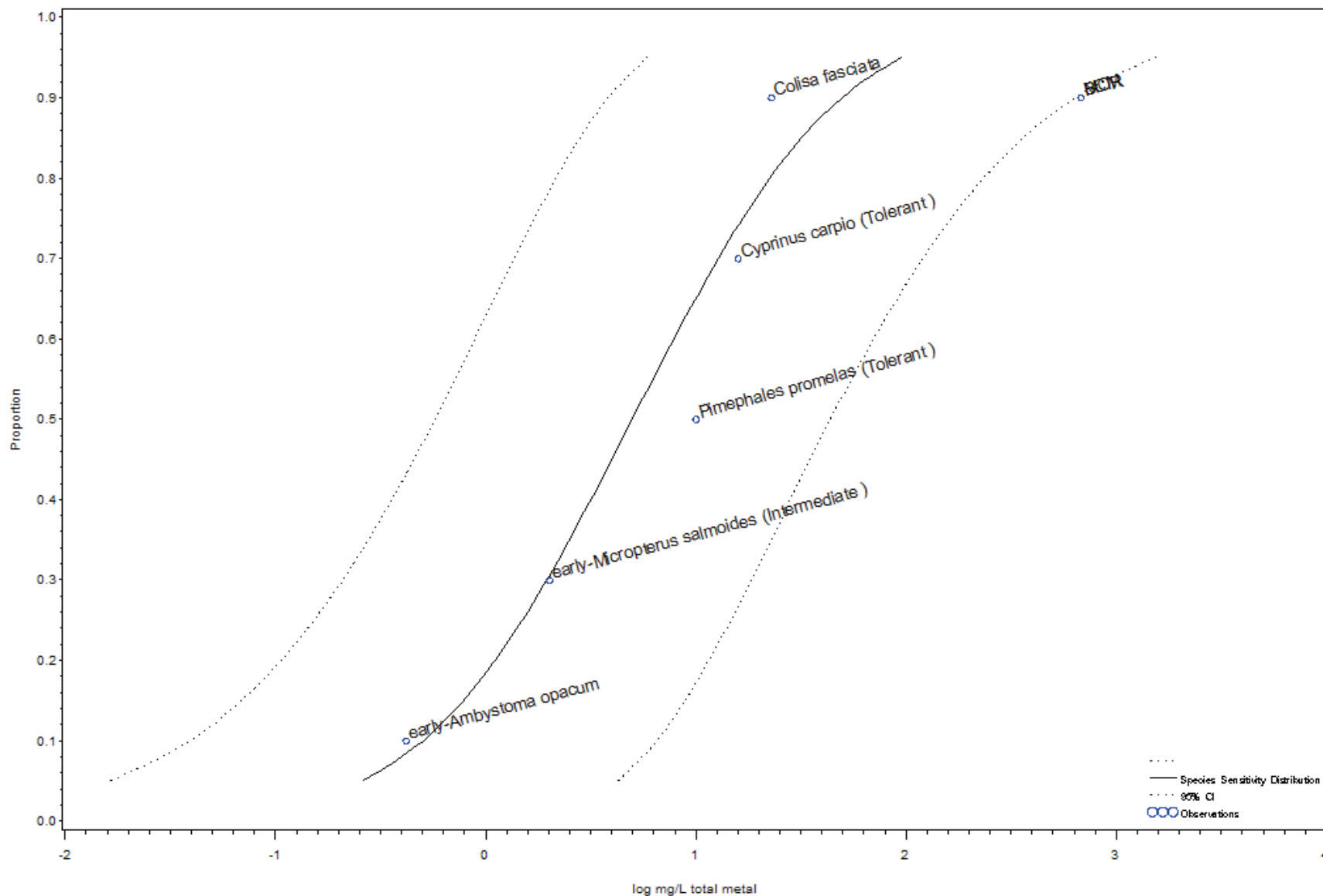
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.04495	0.1829	0.01105	-1.34723	-0.73776	-1.95670	3.82310
0.10	3.71845	0.07167	0.2659	0.01932	-1.14463	-0.57525	-1.71402	3.44057
0.20	4.15838	0.12609	0.4289	0.03707	-0.89931	-0.36763	-1.43099	3.10759
0.25	4.32551	0.15628	0.5186	0.04709	-0.80611	-0.28513	-1.32709	3.01747
0.30	4.47560	0.18949	0.6178	0.05812	-0.72241	-0.20916	-1.23565	2.95348
0.50	5.00000	0.37156	1.1782	0.11717	-0.42998	0.07122	-0.93117	2.85564
0.75	5.67449	0.88339	2.9318	0.26618	-0.05385	0.46713	-0.57483	3.01747
0.90	6.28155	1.92610	7.1460	0.51915	0.28468	0.85407	-0.28471	3.44057
0.95	6.64485	3.07097	12.4954	0.75475	0.48728	1.09675	-0.12220	3.82310

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.21429	4.20836	Barbus sophero	0.30971	-0.50905	0.15405	0.30263
0.21429	.	-->HIS	.	-1.20397	.	.
0.78571	5.79164	Channa marulius	0.89959	-0.04596	0.02764	0.60148
0.50000	5.00000	Gambusia affinis (Intermediate )	0.40000	-0.39794	.	.
0.07143	3.53477	Oncorhynchus mykiss (Intermediate )	0.03600	-1.44370	.	.
0.35714	4.63389	early-Bufo melanostictus	0.35500	-0.44977	.	.
0.64286	5.36611	early-Rana breviceps	0.48000	-0.31876	.	.
0.92857	6.46523	early-Rana heckscheri	1.43000	0.15534	.	.

# Nickel SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 150) data for Vertebrate species exposed to nickel in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.28658	4.10046	0.90562	0.69917	2.09801	3	0.12064

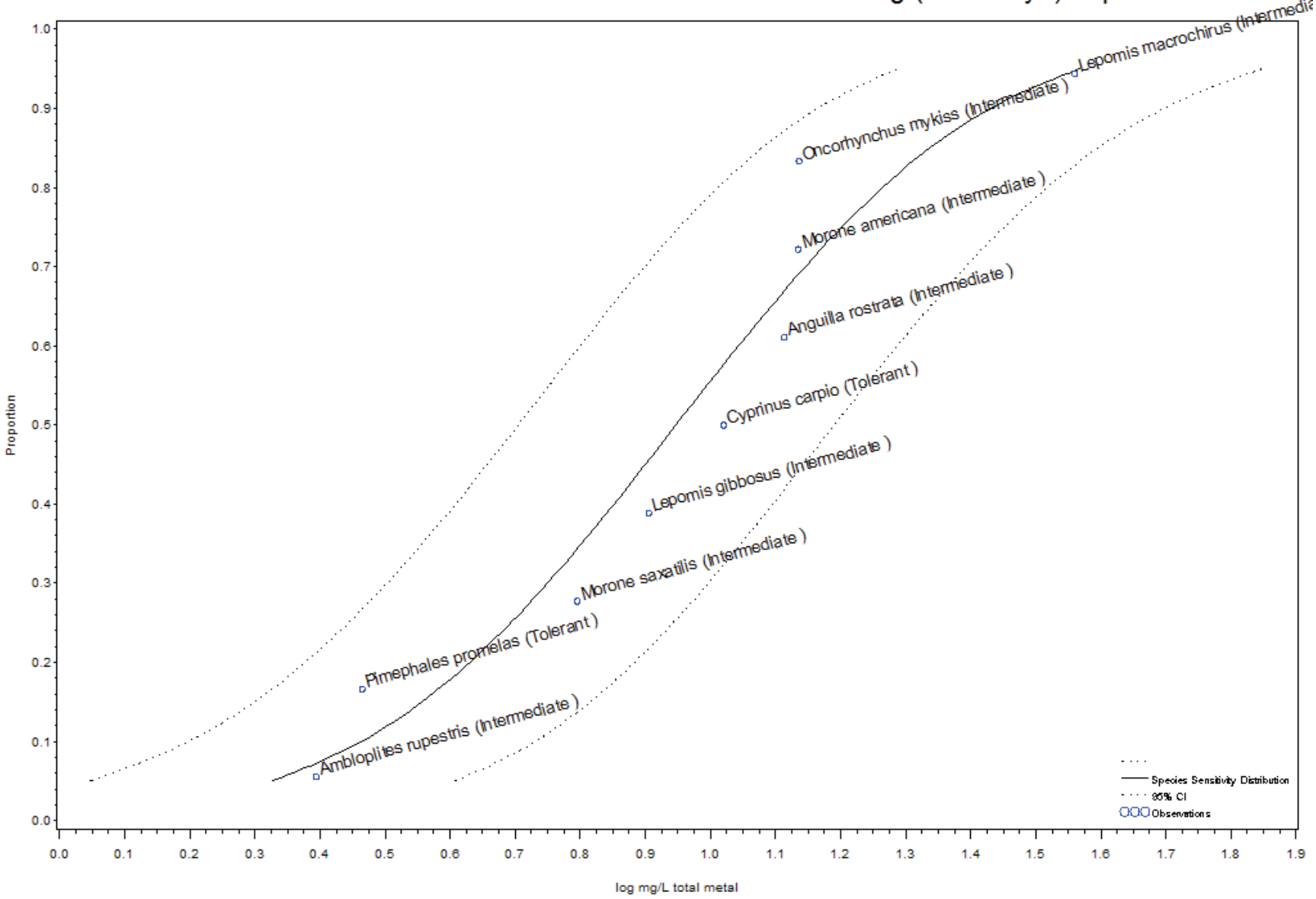
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.2635	2.063	0.0336	-0.57929	0.31447	-1.47306	7.70240
0.10	3.71845	0.5048	3.348	0.0761	-0.29692	0.52482	-1.11865	6.48266
0.20	4.15838	1.1092	6.278	0.1960	0.04502	0.79781	-0.70777	5.48294
0.25	4.32551	1.4960	8.089	0.2767	0.17492	0.90789	-0.55804	5.22218
0.30	4.47560	1.9570	10.236	0.3741	0.29158	1.01014	-0.42698	5.03950
0.50	5.00000	5.0024	24.839	1.0074	0.69917	1.39514	0.00321	4.76410
0.75	5.67449	16.7272	90.446	3.0936	1.22342	1.95639	0.49046	5.22218
0.90	6.28155	49.5752	328.853	7.4736	1.69526	2.51700	0.87353	6.48266
0.95	6.64485	94.9822	743.721	12.1304	1.97764	2.87141	1.08387	7.70240

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Colisa fasciata	23.0000	1.36173	.	.
0.9	.	-->BCM	.	2.83321	.	.
0.9	.	-->MOR	.	2.83321	.	.
0.7	5.52440	Cyprinus carpio (Tolerant )	16.0000	1.20412	.	.
0.5	5.00000	Pimephales promelas (Tolerant )	10.0328	1.00142	0.22074	0.22043
0.1	3.71845	early-Ambystoma opacum	0.4200	-0.37675	.	.
0.3	4.47560	early-Micropterus salmoides (Intermediate )	2.0200	0.30535	.	.

### Nickel SSD for Vertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 151) data for Vertebrate species exposed to nickel in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	2.65266	2.48633	0.94012	0.94760	1.04248	7	0.066744

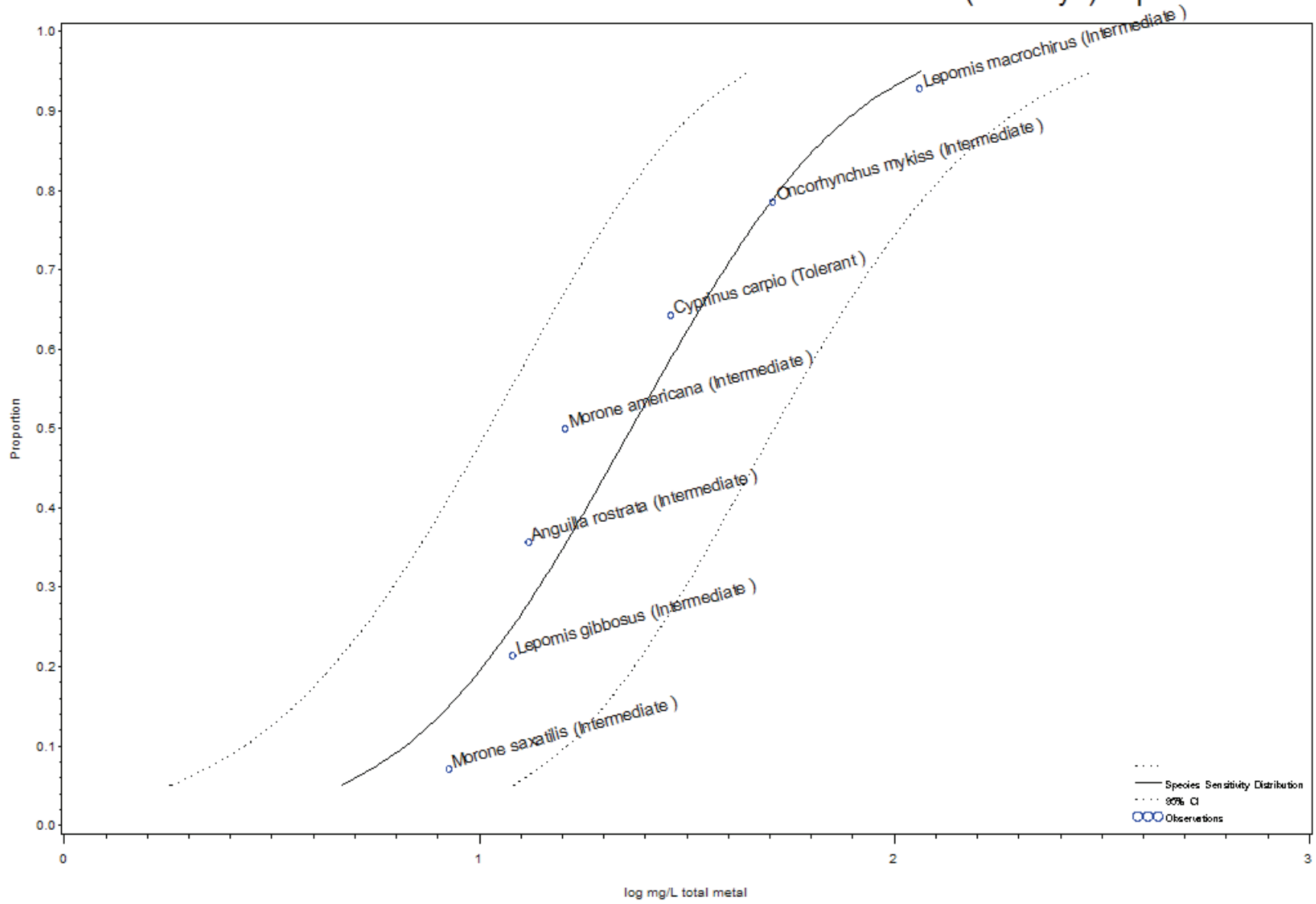
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	2.1258	3.5645	1.2678	0.32753	0.55200	0.10306	1.08037
0.10	3.71845	2.9140	4.7608	1.7836	0.46449	0.67768	0.25129	1.02171
0.20	4.15838	4.2690	6.8093	2.6764	0.63033	0.83310	0.42756	0.96810
0.25	4.32551	4.9355	7.8197	3.1152	0.69334	0.89319	0.49348	0.95318
0.30	4.47560	5.6223	8.8648	3.5659	0.74992	0.94767	0.55216	0.94248
0.50	5.00000	8.8635	13.8708	5.6638	0.94760	1.14210	0.75311	0.92594
0.75	5.67449	15.9175	25.2189	10.0467	1.20187	1.40173	1.00202	0.95318
0.90	6.28155	26.9602	44.0473	16.5017	1.43072	1.64392	1.21753	1.02171
0.95	6.64485	36.9557	61.9657	22.0400	1.56768	1.79215	1.34321	1.08037

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.05556	3.40678	Ambloplites rupestris (Intermediate )	2.4800	0.39445	.	.
0.61111	5.28222	Anguilla rostrata (Intermediate )	13.0000	1.11394	0.00000	0.00000
0.50000	5.00000	Cyprinus carpio (Tolerant )	10.4995	1.02117	0.00585	0.00573
0.38889	4.71778	Lepomis gibbosus (Intermediate )	8.0498	0.90579	0.00381	0.00421
0.94444	6.59322	Lepomis macrochirus (Intermediate )	36.3131	1.56006	0.33054	0.21188
0.94444	.	-->NOEC -MOR	.	3.73767	.	.
0.72222	5.58946	Morone americana (Intermediate )	13.6499	1.13513	0.00225	0.00198
0.27778	4.41054	Morone saxatilis (Intermediate )	6.2498	0.79587	0.00491	0.00617
0.83333	5.96742	Oncorhynchus mykiss (Intermediate )	13.7000	1.13672	.	.
0.83333	.	-->NOEC -MOR	.	1.72277	.	.
0.16667	4.03258	Pimephales promelas (Tolerant )	2.9195	0.46531	0.00074	0.00158

# Nickel SSD for Vertebrates - in soft water at T>15C over moderate (1-3 days) exposure





Species Sensitivity Distribution (SSD 152) data for Vertebrate species exposed to nickel in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	2.35607	1.78085	0.92502	1.36632	0.96904	5	0.087209

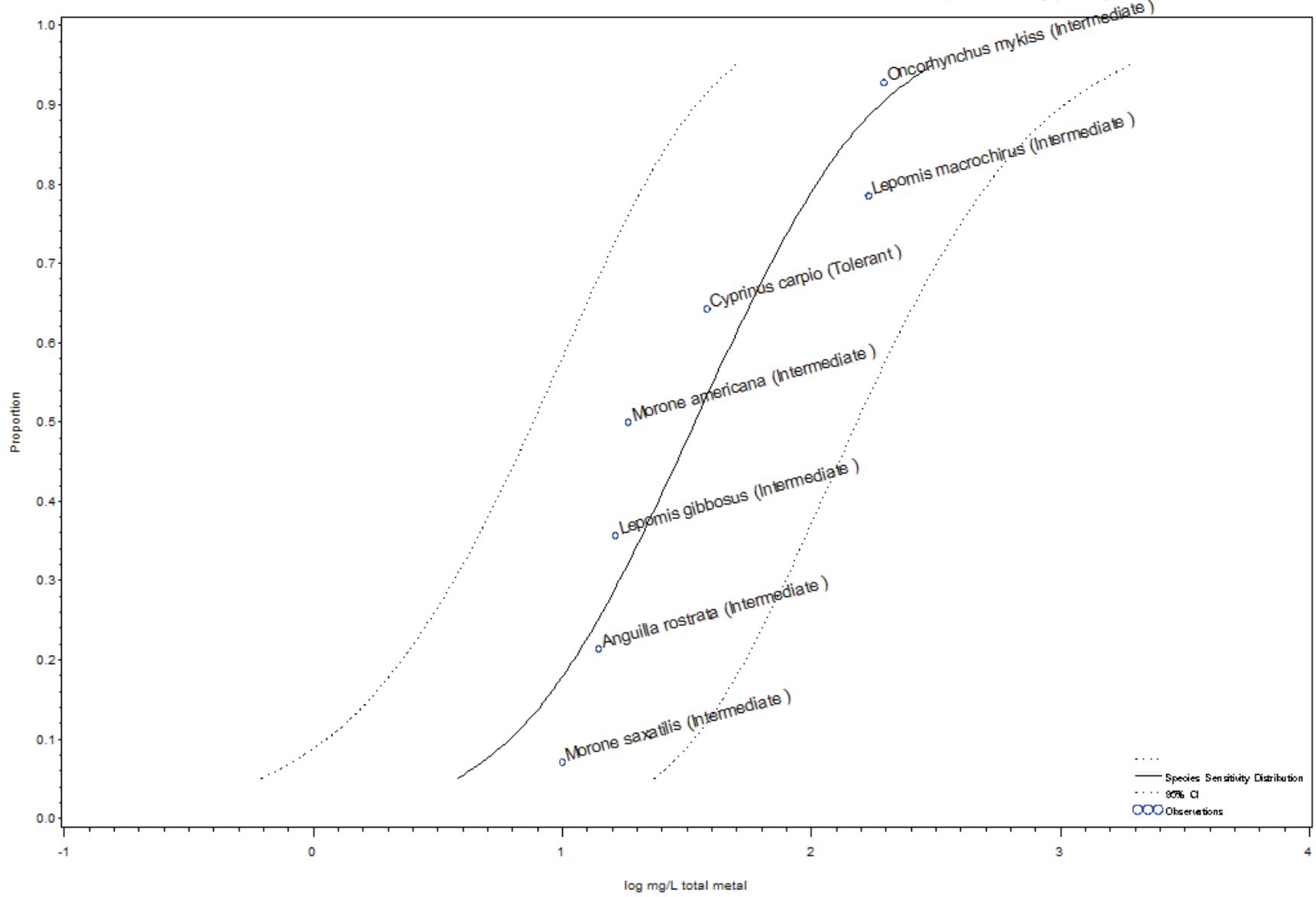
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	4.658	9.822	2.2089	0.66819	0.99220	0.34417	1.63449
0.10	3.71845	6.643	13.376	3.2995	0.82238	1.12632	0.51844	1.51679
0.20	4.15838	10.212	19.690	5.2963	1.00911	1.29424	0.72397	1.40950
0.25	4.32551	12.024	22.901	6.3128	1.08004	1.35986	0.80022	1.37964
0.30	4.47560	13.923	26.286	7.3751	1.14375	1.41972	0.86777	1.35821
0.50	5.00000	23.244	43.284	12.4828	1.36632	1.63633	1.09631	1.32509
0.75	5.67449	44.936	85.588	23.5927	1.65260	1.93242	1.37278	1.37964
0.90	6.28155	81.331	163.755	40.3938	1.91025	2.21420	1.60631	1.51679
0.95	6.64485	115.999	244.608	55.0091	2.06445	2.38847	1.74043	1.63449

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.35714	4.63389	Anguilla rostrata (Intermediate )	13.150	1.11892	.002335316	.002087111
0.64286	5.36611	Cyprinus carpio (Tolerant )	29.000	1.46240	.002117888	.001448232
0.21429	4.20836	Lepomis gibbosus (Intermediate )	12.050	1.08098	.002548501	.002357576
0.92857	6.46523	Lepomis macrochirus (Intermediate )	115.000	2.06070	.	.
0.50000	5.00000	Morone americana (Intermediate )	16.100	1.20682	.003814864	.003161094
0.07143	3.53477	Morone saxatilis (Intermediate )	8.450	0.92685	.003634274	.003921106
0.78571	5.79164	Oncorhynchus mykiss (Intermediate )	51.000	1.70757	.	.

# Nickel SSD for Vertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 153) data for Vertebrate species exposed to nickel in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	1.72659	2.35272	0.85666	1.53324	1.67108	5	0.16672

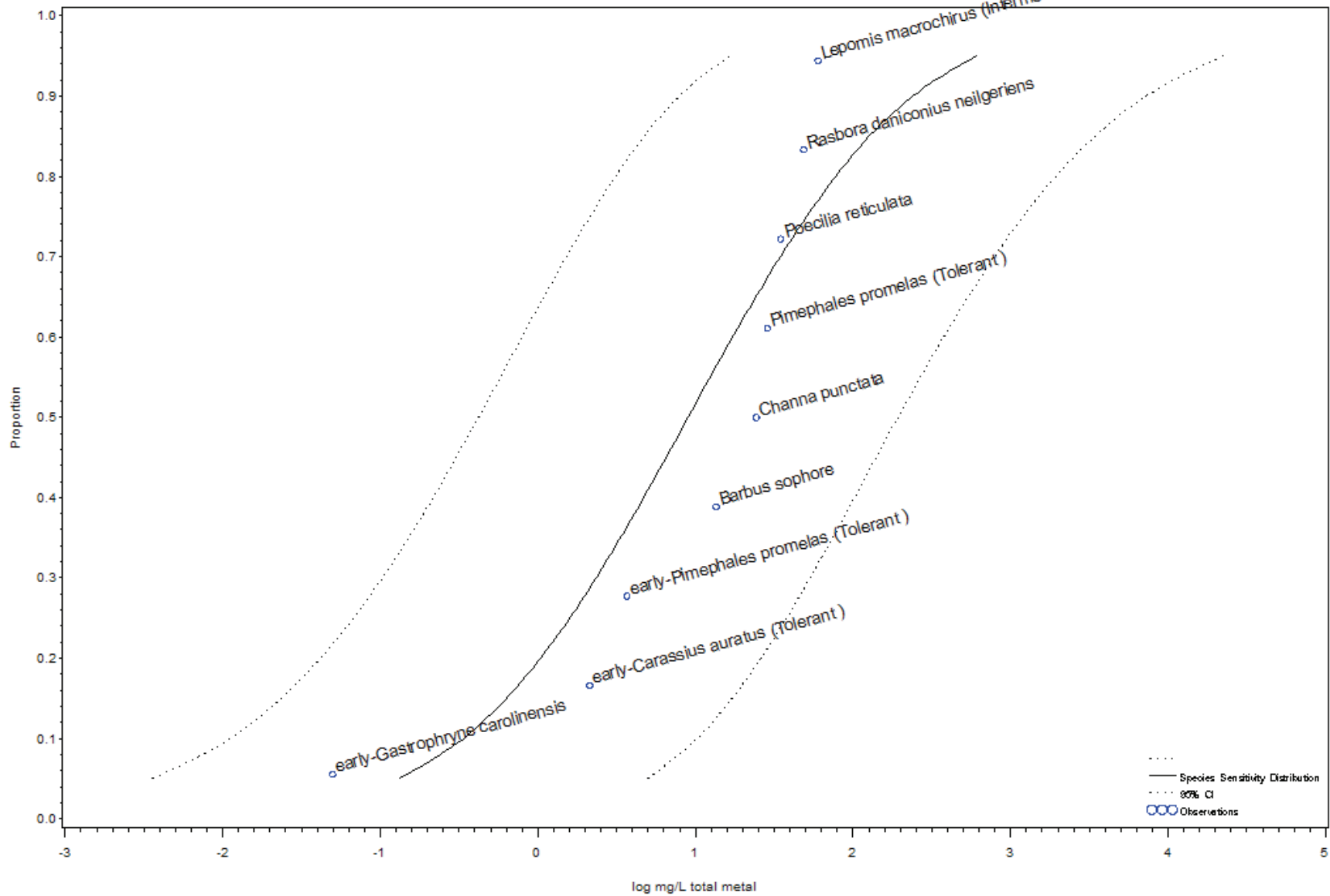
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	3.807	15.82	0.9159	0.58058	1.19932	-0.03816	3.91600
0.10	3.71845	6.180	23.40	1.6321	0.79100	1.36925	0.21275	3.52252
0.20	4.15838	11.112	38.55	3.2034	1.04579	1.58598	0.50561	3.18056
0.25	4.32551	13.886	46.99	4.1040	1.14259	1.67198	0.61321	3.08811
0.30	4.47560	16.964	56.38	5.1043	1.22952	1.75110	0.70794	3.02249
0.50	5.00000	34.138	110.32	10.5637	1.53324	2.04266	1.02382	2.92220
0.75	5.67449	83.924	283.97	24.8028	1.92389	2.45327	1.39450	3.08811
0.90	6.28155	188.574	714.06	49.8001	2.27548	2.85373	1.69723	3.52252
0.95	6.64485	306.124	1272.43	73.6479	2.48590	3.10463	1.86716	3.91600

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.21429	4.20836	Anguilla rostrata (Intermediate )	14.050	1.14767	.002185721	.001904480
0.64286	5.36611	Cyprinus carpio (Tolerant )	38.250	1.58263	.000802857	.000507292
0.35714	4.63389	Lepomis gibbosus (Intermediate )	16.400	1.21484	0	0
0.78571	5.79164	Lepomis macrochirus (Intermediate )	170.000	2.23045	.	.
0.50000	5.00000	Morone americana (Intermediate )	18.400	1.26482	0	0
0.07143	3.53477	Morone saxatilis (Intermediate )	10.000	1.00000	0	0
0.92857	6.46523	Oncorhynchus mykiss (Intermediate )	196.000	2.29226	.	.

### Nickel SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 154) data for Vertebrate species exposed to nickel in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	0.89855	4.14262	0.79349	0.95418	7.66842	7	0.23019

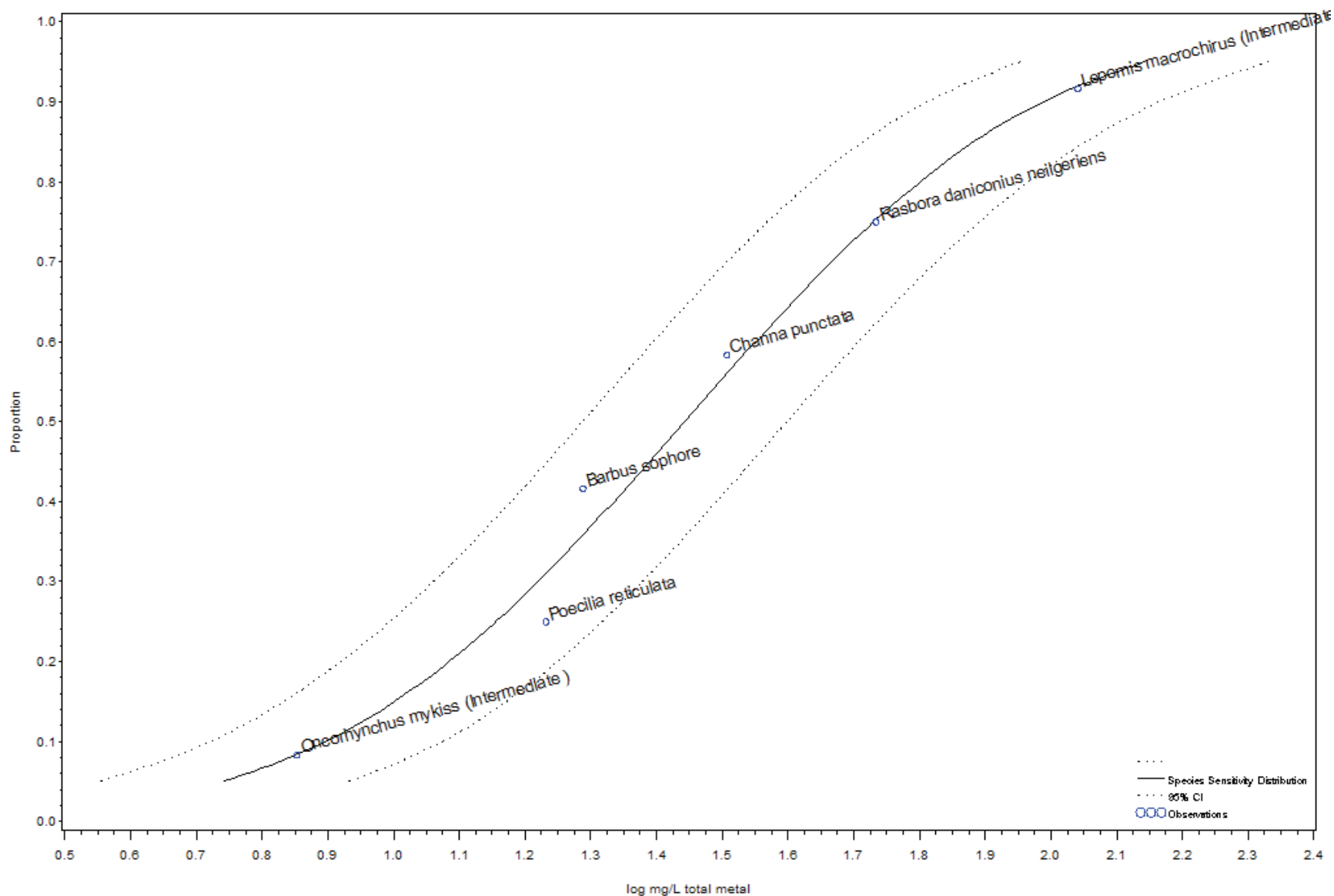
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.133	2.41	0.0073	-0.87639	0.38229	-2.13507	18.0865
0.10	3.71845	0.337	5.19	0.0219	-0.47207	0.71475	-1.65889	15.3101
0.20	4.15838	1.041	13.72	0.0790	0.01753	1.13742	-1.10235	13.1033
0.25	4.32551	1.598	20.16	0.1266	0.20354	1.30457	-0.89749	12.5399
0.30	4.47560	2.347	28.71	0.1919	0.37057	1.45801	-0.71687	12.1486
0.50	5.00000	8.999	104.84	0.7724	0.95418	2.02052	-0.11215	11.5644
0.75	5.67449	50.679	639.52	4.0160	1.70483	2.80585	0.60380	12.5399
0.90	6.28155	240.120	3691.87	15.6175	2.38043	3.56725	1.19361	15.3101
0.95	6.64485	609.187	11051.64	33.5795	2.78475	4.04343	1.52607	18.0865

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.38889	4.71778	Barbus sophore	13.5700	1.13258	.	.
0.50000	5.00000	Channa punctata	24.5000	1.38917	.	.
0.94444	6.59322	Lepomis macrochirus (Intermediate )	60.3000	1.78032	.	.
0.94444	.	-->NOEC -MOR	.	3.61092	.	.
0.61111	5.28222	Pimephales promelas (Tolerant )	28.7008	1.45789	0.04781	0.032793
0.72222	5.58946	Poecilia reticulata	34.9000	1.54283	.	.
0.83333	5.96742	Rasbora daniconius neilgeriens	48.8300	1.68869	.	.
0.16667	4.03258	early-Carassius auratus (Tolerant )	2.1400	0.33041	.	.
0.05556	3.40678	early-Gastrophryne carolinensis	0.0500	-1.30103	.	.
0.27778	4.41054	early-Pimephales promelas (Tolerant )	3.6878	0.56677	0.04991	0.088058
0.27778	.	-->MOR	.	-0.64115	0.46165	.

# Nickel SSD for Vertebrates - in very hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 155) data for Vertebrate species exposed to nickel in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	2.34979	1.60932	0.98773	1.44297	0.86291	4	0.014797

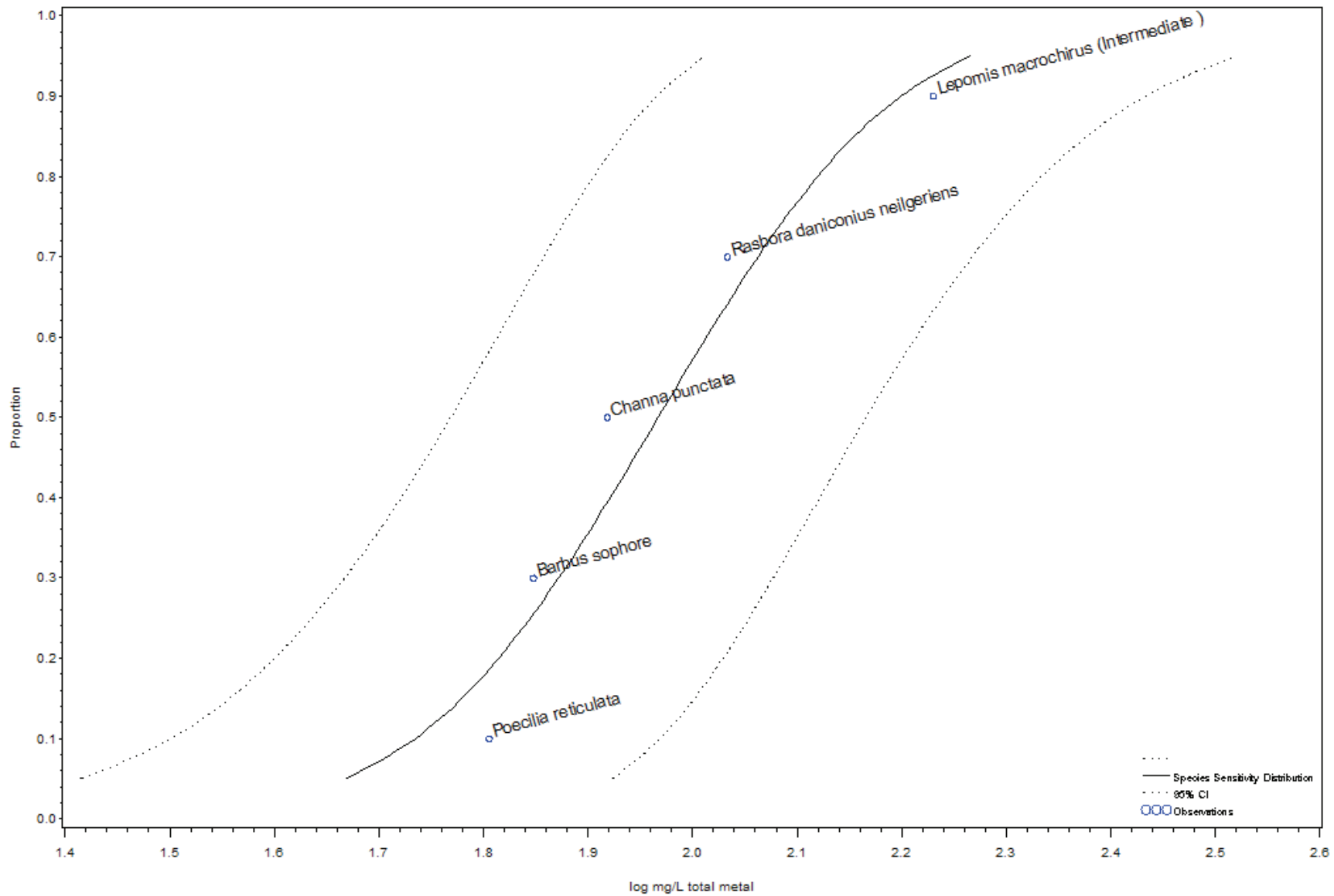
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	5.533	7.732	3.9594	0.74297	0.88832	0.59763	0.68190
0.10	3.71845	7.899	10.796	5.7797	0.89758	1.03326	0.76191	0.63501
0.20	4.15838	12.156	16.269	9.0831	1.08480	1.21137	0.95823	0.59116
0.25	4.32551	14.320	19.051	10.7633	1.15593	1.27991	1.03194	0.57876
0.30	4.47560	16.588	21.974	12.5224	1.21980	1.34192	1.09769	0.56980
0.50	5.00000	27.731	36.490	21.0751	1.44297	1.56217	1.32377	0.55586
0.75	5.67449	53.705	71.449	40.3673	1.73001	1.85400	1.60603	0.57876
0.90	6.28155	97.356	133.056	71.2340	1.98836	2.12403	1.85269	0.63501
0.95	6.64485	138.986	194.230	99.4550	2.14297	2.28832	1.99763	0.68190

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.41667	4.78957	Barbus sophore	19.437	1.28862	0.12413	0.09633
0.58333	5.21043	Channa punctata	32.179	1.50758	0.08781	0.05825
0.91667	6.38299	Lepomis macrochirus (Intermediate )	110.000	2.04139	.	.
0.08333	3.61701	Oncorhynchus mykiss (Intermediate )	7.140	0.85370	.	.
0.25000	4.32551	Poecilia reticulata	17.059	1.23195	0.72320	0.58704
0.75000	5.67449	Rasbora daniconius neilgeriens	54.273	1.73458	0.04523	0.02607

# Nickel SSD for Vertebrates - in very hard water at T>15C over short (<=1 day) exposure





Species Sensitivity Distribution (SSD 156) data for Vertebrate species exposed to nickel in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	5.51592	-5.85160	0.92275	1.96732	0.11630	3	0.098748

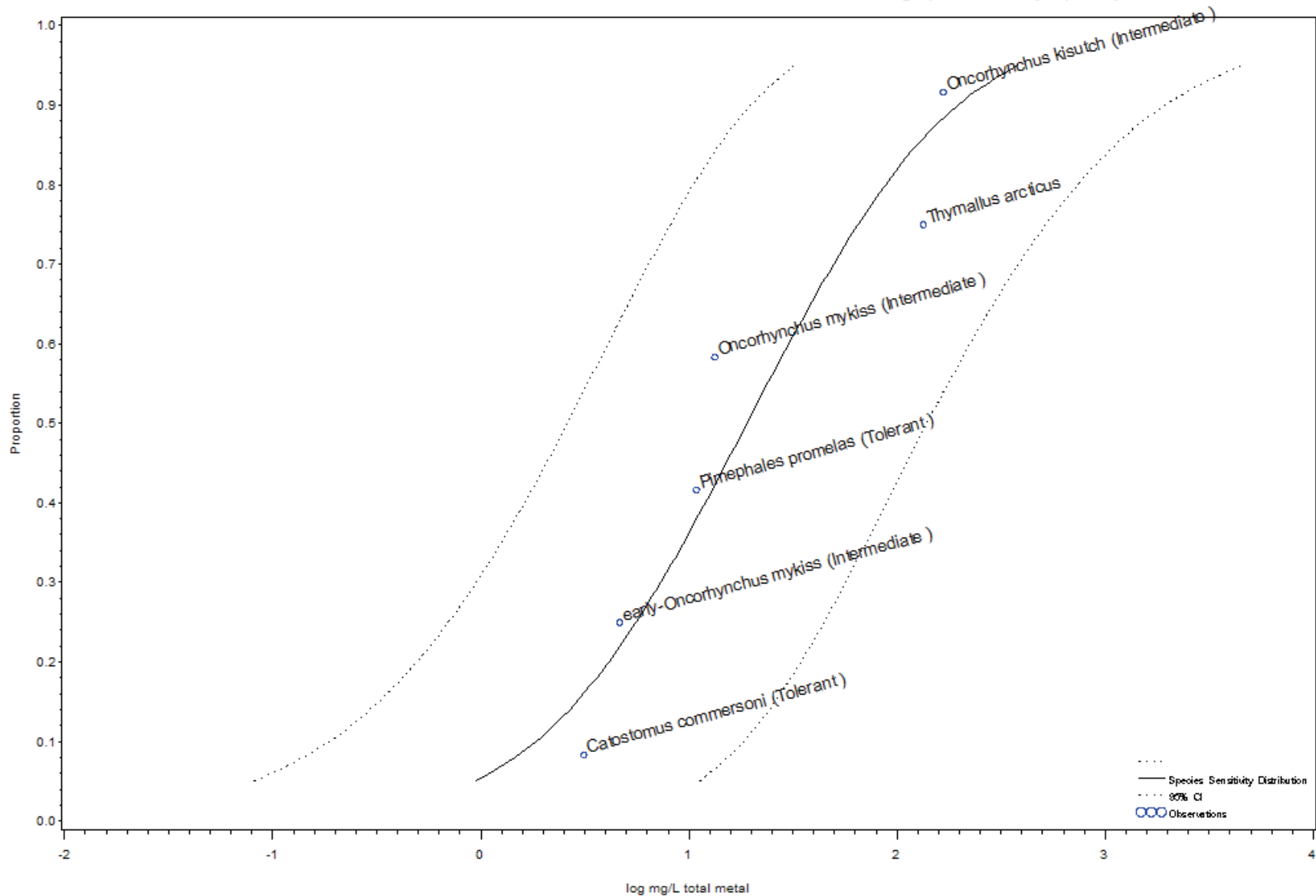
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	46.679	71.952	30.283	1.66912	1.85704	1.48120	0.89266
0.10	3.71845	54.323	80.899	36.478	1.73499	1.90794	1.56203	0.81770
0.20	4.15838	65.274	94.056	45.300	1.81474	1.97339	1.65610	0.74694
0.25	4.32551	69.991	99.903	49.035	1.84504	1.99958	1.69051	0.72677
0.30	4.47560	74.517	105.634	52.566	1.87225	2.02380	1.72070	0.71216
0.50	5.00000	92.752	130.074	66.139	1.96732	2.11419	1.82046	0.68932
0.75	5.67449	122.915	175.444	86.113	2.08960	2.24414	1.93507	0.72677
0.90	6.28155	158.365	235.838	106.342	2.19966	2.37261	2.02671	0.81770
0.95	6.64485	184.300	284.082	119.565	2.26552	2.45344	2.07760	0.89266

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.3	4.47560	Barbus sophore	70.500	1.84819	.	.
0.5	5.00000	Channa punctata	82.910	1.91860	0.11511	0.059997
0.9	6.28155	Lepomis macrochirus (Intermediate )	170.000	2.23045	.	.
0.1	3.71845	Poecilia reticulata	63.937	1.80576	0.08141	0.045085
0.7	5.52440	Rasbora daniconius neilgeriens	108.049	2.03362	0.20149	0.099078

# Selenium SSD for Vertebrates - in water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 161) data for Vertebrate species exposed to selenium in water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	1.26533	3.38061	0.88978	1.27981	2.68079	4	0.13292

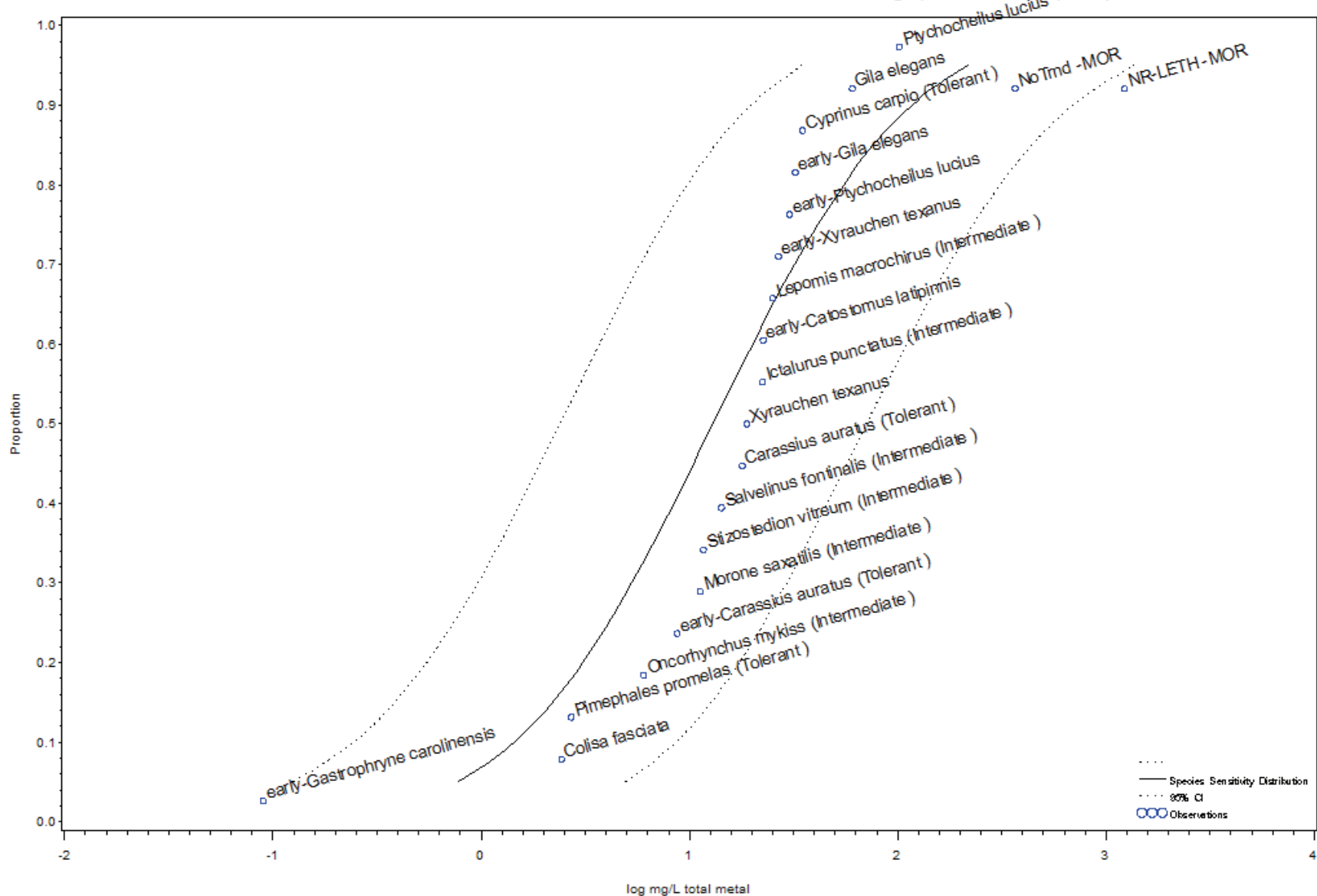
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.955	6.36	0.1434	-0.02012	0.80329	-0.84354	6.50897
0.10	3.71845	1.849	10.75	0.3180	0.26700	1.03156	-0.49757	5.64323
0.20	4.15838	4.118	21.06	0.8051	0.61468	1.32351	-0.09416	4.91940
0.25	4.32551	5.582	27.52	1.1319	0.74676	1.43971	0.05381	4.72835
0.30	4.47560	7.335	35.22	1.5274	0.86538	1.54682	0.18394	4.59394
0.50	5.00000	19.046	87.76	4.1338	1.27981	1.94328	0.61635	4.39045
0.75	5.67449	64.993	320.49	13.1802	1.81287	2.50582	1.11992	4.72835
0.90	6.28155	196.171	1140.77	33.7341	2.29263	3.05720	1.52807	5.64323
0.95	6.64485	379.974	2530.30	57.0605	2.57975	3.40317	1.75634	6.50897

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.08333	3.61701	Catostomus commersoni (Tolerant )	3.140	0.49693	.	.
0.08333	.	-->LT50 -MOR	.	2.50532	1.26697	.
0.08333	.	-->MOR	.	3.36730	.	.
0.91667	6.38299	Oncorhynchus kisutch (Intermediate )	167.469	2.22394	0.50163	0.22556
0.58333	5.21043	Oncorhynchus mykiss (Intermediate )	13.363	1.12592	0.59054	0.52449
0.58333	.	-->NR-LETH -MOR	.	2.34181	.	.
0.58333	.	-->NoTrend -MOR	.	0.09531	.	.
0.41667	4.78957	Pimephales promelas (Tolerant )	10.893	1.03713	0.02255	0.02174
0.75000	5.67449	Thymallus arcticus	134.164	2.12764	0.18050	0.08484
0.25000	4.32551	early-Oncorhynchus mykiss (Intermediate )	4.649	0.66733	0.06528	0.09782
0.25000	.	-->MOR	.	-0.87664	1.10717	.

### Selenium SSD for Vertebrates - in water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 162) data for Vertebrate species exposed to selenium in water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
19	1.34480	3.50121	0.80093	1.11451	7.87117	17	0.20812

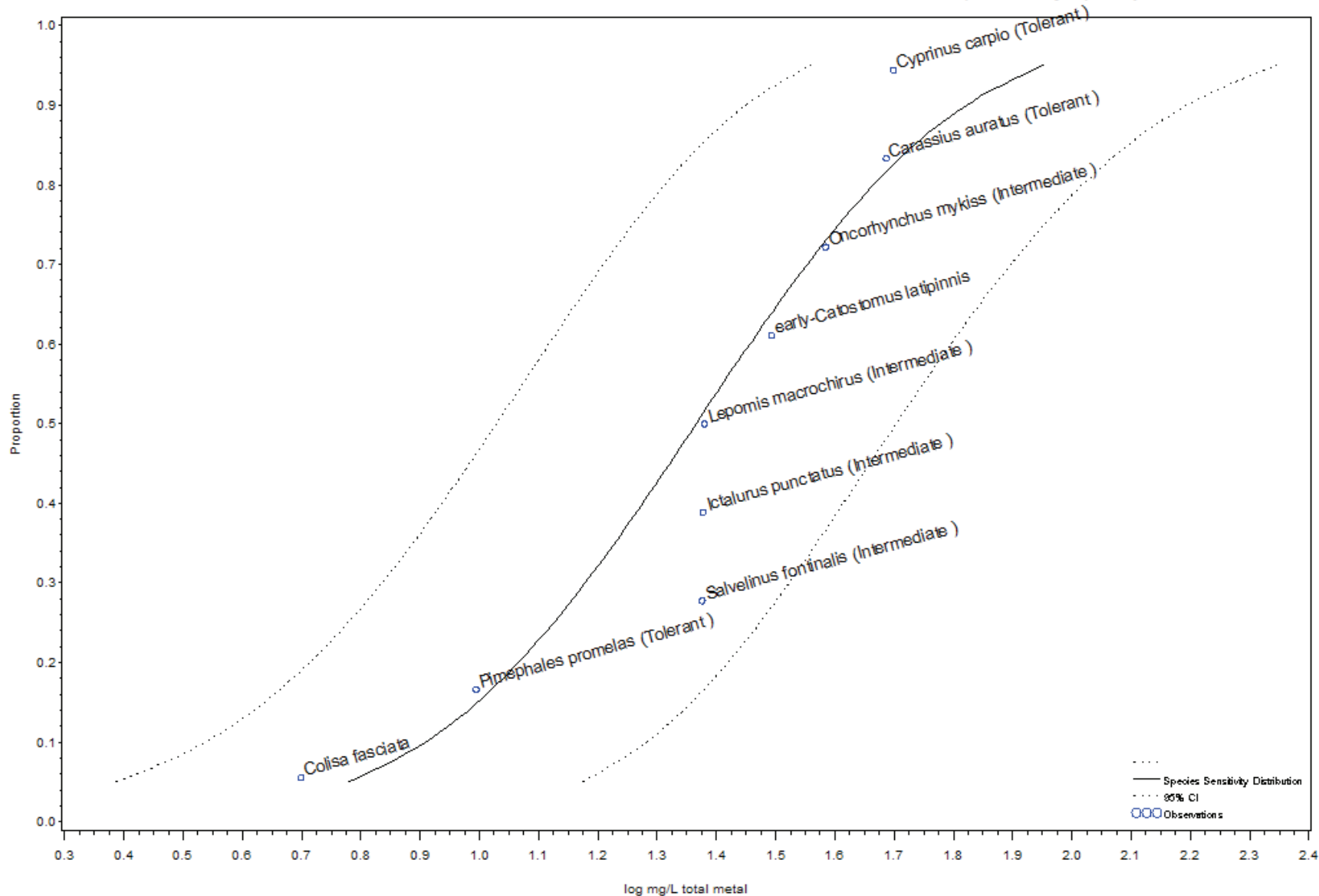
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.779	3.542	0.1712	-0.10861	0.54925	-0.76648	4.32858
0.10	3.71845	1.451	6.300	0.3340	0.16154	0.79933	-0.47625	4.11271
0.20	4.15838	3.081	12.832	0.7397	0.48868	1.10829	-0.13094	3.92488
0.25	4.32551	4.102	16.887	0.9962	0.61296	1.22755	-0.00163	3.87419
0.30	4.47560	5.304	21.655	1.2989	0.72456	1.33556	0.11357	3.83826
0.50	5.00000	13.017	52.478	3.2288	1.11451	1.71998	0.50905	3.78345
0.75	5.67449	41.311	170.082	10.0341	1.61607	2.23066	1.00148	3.87419
0.90	6.28155	116.811	507.306	26.8966	2.06748	2.70527	1.42970	4.11271
0.95	6.64485	217.589	989.691	47.8383	2.33764	2.99550	1.67978	4.32858

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.44737	4.86769	Carassius auratus (Tolerant )	17.965	1.25443	0.23298	0.18573
0.07895	3.58781	Colisa fasciata	2.442	0.38771	0.05025	0.12960
0.86842	6.11896	Cyprinus carpio (Tolerant )	35.000	1.54407	.	.
0.92105	6.41219	Gila elegans	60.741	1.78348	0.67071	0.37607
0.92105	.	-->NR-LETH -MOR	.	3.09104	.	.
0.92105	.	-->NoTrend -MOR	.	2.56495	.	.
0.55263	5.13231	Ictalurus punctatus (Intermediate )	22.505	1.35228	0.40177	0.29710
0.55263	.	-->NoTrend -MOR	.	3.43399	.	.
0.65789	5.40672	Lepomis macrochirus (Intermediate )	25.183	1.40110	0.26483	0.18901
0.65789	.	-->NR-ZERO -MOR	.	4.72739	.	.
0.28947	4.44508	Morone saxatilis (Intermediate )	11.290	1.05270	0.08756	0.08318
0.18421	4.10057	Oncorhynchus mykiss (Intermediate )	6.044	0.78133	0.96952	1.24086
0.18421	.	-->GRO	.	-0.74444	.	.
0.18421	.	-->HIS	.	-0.74444	.	.
0.18421	.	-->NR-LETH -MOR	.	4.11087	.	.
0.13158	3.88104	Pimephales promelas (Tolerant )	2.720	0.43457	0.33728	0.77612
0.13158	.	-->DVP	.	2.50532	0.28671	.
0.13158	.	-->LT50 -MOR	.	-6.10304	1.13804	.
0.13158	.	-->MOR	.	3.68888	.	.
0.13158	.	-->NR-LETH -MOR	.	2.27213	.	.
0.97368	6.93793	Ptychocheilus lucius	102.191	2.00941	0.55374	0.27557
0.39474	4.73301	Salvelinus fontinalis (Intermediate )	14.300	1.15534	.	.
0.34211	4.59328	Stizostedion vitreum (Intermediate )	11.700	1.06819	.	.
0.50000	5.00000	Xyrauchen texanus	18.921	1.27694	0.26158	0.20485
0.23684	4.28350	early-Carassius auratus (Tolerant )	8.780	0.94349	.	.
0.60526	5.26699	early-Catostomus latipinnis	22.667	1.35539	0.10516	0.07759
0.02632	3.06207	early-Gastrophryne carolinensis	0.090	-1.04576	.	.
0.81579	5.89943	early-Gila elegans	32.326	1.50956	0.32641	0.21623
0.76316	5.71650	early-Ptychocheilus lucius	30.397	1.48284	0.47618	0.32113
0.71053	5.55492	early-Xyrauchen texanus	26.833	1.42867	0.35719	0.25002

### Selenium SSD for Vertebrates - in water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 163) data for Vertebrate species exposed to selenium in water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	2.80887	1.16338	0.87037	1.36589	0.86077	7	0.14449

Predicted Values

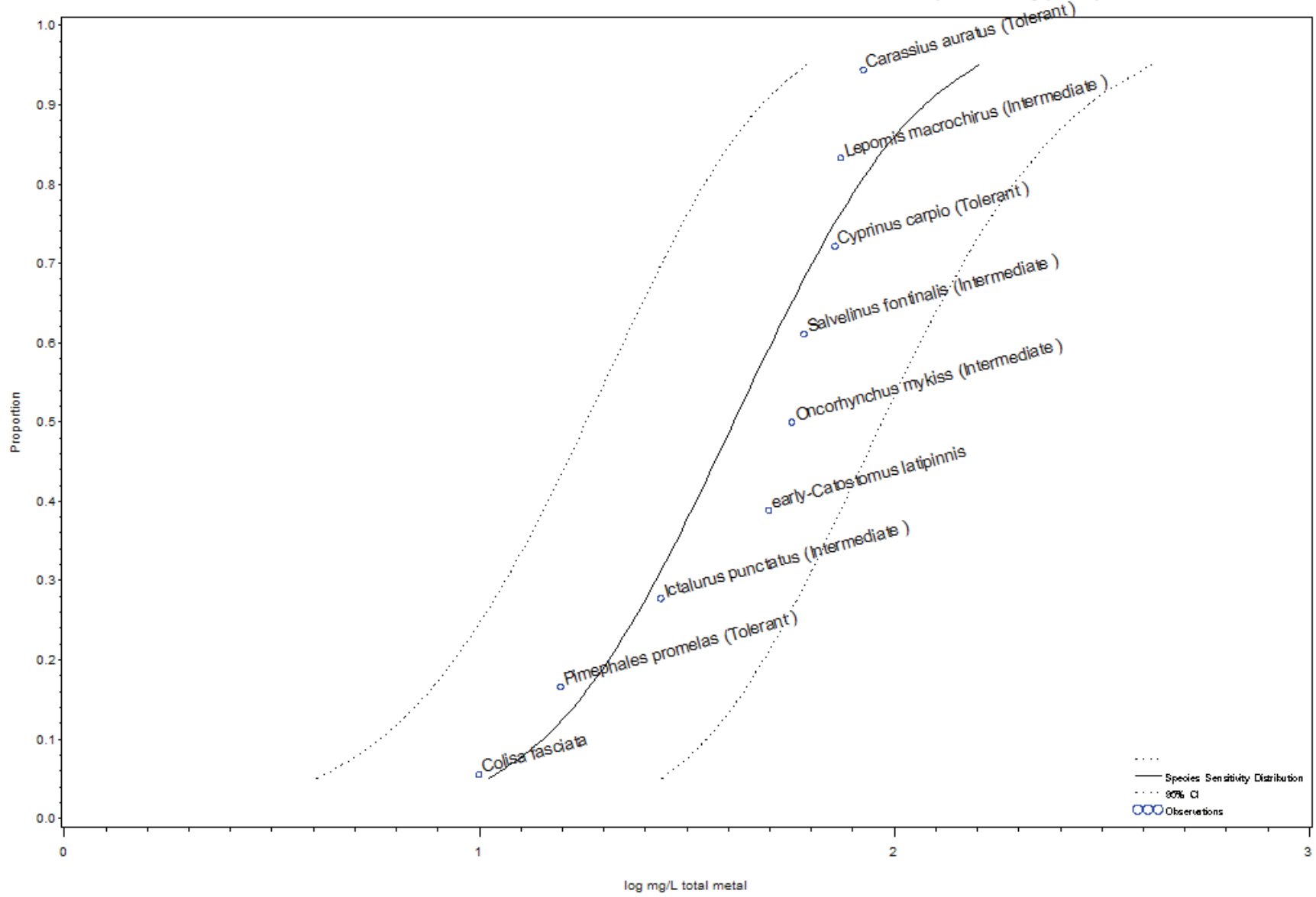
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	6.0298	12.454	2.9194	0.78030	1.09531	0.46529	1.58124
0.10	3.71845	8.1216	16.139	4.0871	0.90964	1.20787	0.61142	1.48388
0.20	4.15838	11.6483	22.332	6.0758	1.06626	1.34892	0.78360	1.39557
0.25	4.32551	13.3587	25.354	7.0384	1.12576	1.40405	0.84748	1.37108
0.30	4.47560	15.1077	28.467	8.0178	1.17920	1.45434	0.90406	1.35355
0.50	5.00000	23.2216	43.267	12.4633	1.36589	1.63615	1.09563	1.32649
0.75	5.67449	40.3665	76.614	21.2683	1.60602	1.88431	1.32773	1.37108
0.90	6.28155	66.3963	131.938	33.4133	1.82214	2.12037	1.52392	1.48388
0.95	6.64485	89.4303	184.710	43.2991	1.95148	2.26649	1.63648	1.58124

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.83333	5.96742	Carassius auratus (Tolerant )	48.6761	1.68732	0.08413	0.04986
0.05556	3.40678	Colisa fasciata	5.0042	0.69933	0.08746	0.12506
0.94444	6.59322	Cyprinus carpio (Tolerant )	50.0000	1.69897	.	.
0.38889	4.71778	Ictalurus punctatus (Intermediate )	23.8640	1.37774	0.16496	0.11973
0.50000	5.00000	Lepomis macrochirus (Intermediate )	24.0000	1.38021	0.00000	0.00000
0.50000	.	-->NR-LETH -MOR	.	4.83628	.	.
0.72222	5.58946	Oncorhynchus mykiss (Intermediate )	38.4187	1.58454	0.03994	0.02520
0.16667	4.03258	Pimephales promelas (Tolerant )	9.8823	0.99486	0.37693	0.37888
0.16667	.	-->LT50 -MOR	.	1.13373	1.62523	.
0.16667	.	-->NR-LETH -MOR	.	1.79176	.	.
0.27778	4.41054	Salvelinus fontinalis (Intermediate )	23.8000	1.37658	.	.
0.61111	5.28222	early-Catostomus latipinnis	31.1518	1.49348	0.19129	0.12808



# Selenium SSD for Vertebrates - in water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 164) data for Vertebrate species exposed to selenium in water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	2.78821	0.50095	0.85754	1.61360	0.86070	7	0.15879

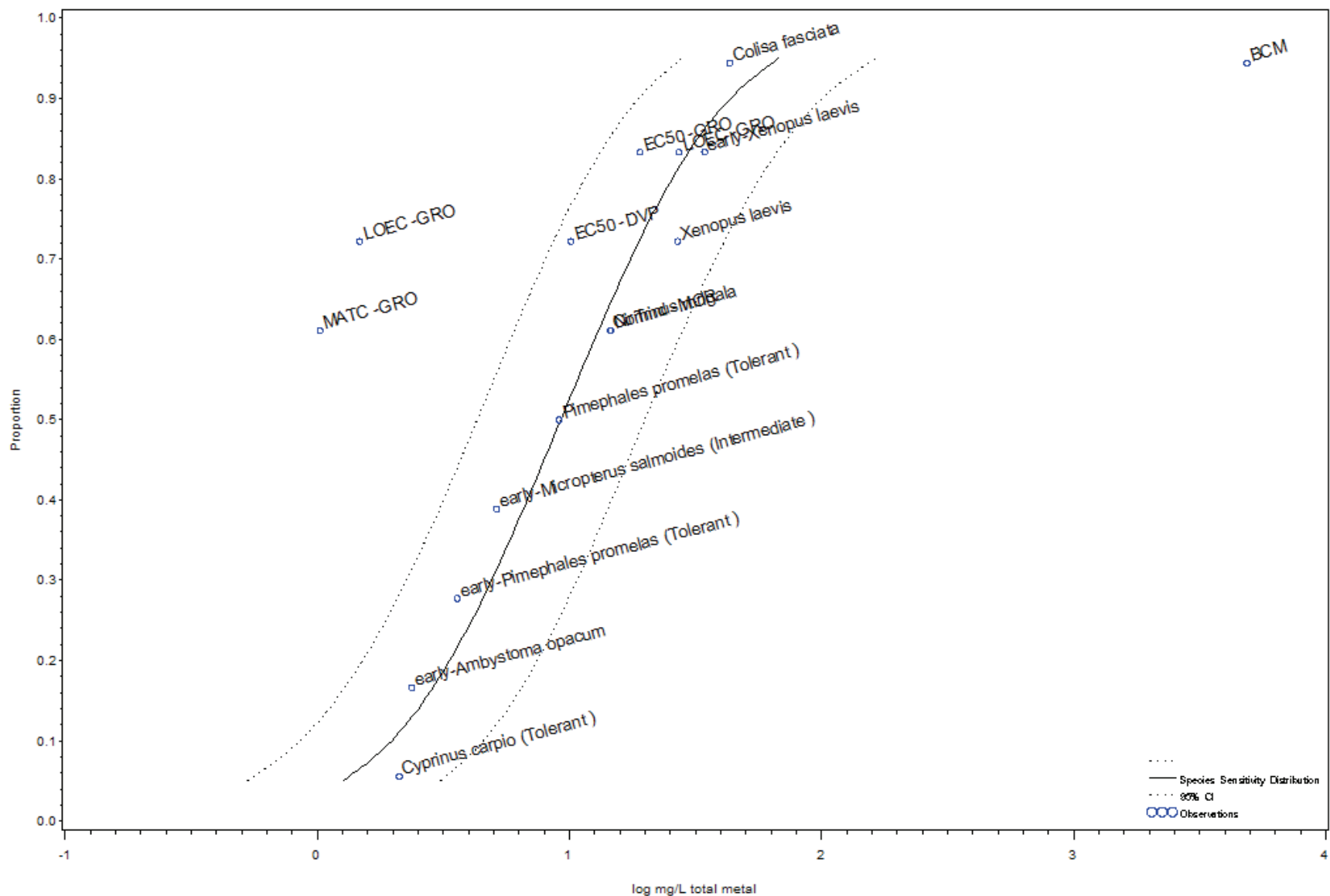
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	10.560	22.751	4.9016	1.02366	1.35699	0.69034	1.69024
0.10	3.71845	14.255	29.467	6.8959	1.15396	1.46933	0.83859	1.58338
0.20	4.15838	20.500	40.780	10.3049	1.31175	1.61045	1.01304	1.48663
0.25	4.32551	23.534	46.313	11.9583	1.37169	1.66571	1.07767	1.45984
0.30	4.47560	26.639	52.019	13.6418	1.42552	1.71616	1.13487	1.44065
0.50	5.00000	41.077	79.252	21.2901	1.61360	1.89901	1.32818	1.41107
0.75	5.67449	71.697	141.098	36.4320	1.85550	2.14952	1.56148	1.45984
0.90	6.28155	118.366	244.679	57.2607	2.07323	2.38860	1.75786	1.58338
0.95	6.64485	159.781	344.234	74.1648	2.20353	2.53685	1.87020	1.69024

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.94444	6.59322	Carassius auratus (Tolerant )	84.3428	1.92605	0.10105	0.05247
0.05556	3.40678	Colisa fasciata	9.9900	0.99957	.	.
0.72222	5.58946	Cyprinus carpio (Tolerant )	72.0000	1.85733	.	.
0.27778	4.41054	Ictalurus punctatus (Intermediate )	27.4106	1.43792	0.20040	0.13937
0.27778	.	-->NR-LETH -MOR	.	3.49651	.	.
0.83333	5.96742	Lepomis macrochirus (Intermediate )	74.2509	1.87070	0.15716	0.08401
0.50000	5.00000	Oncorhynchus mykiss (Intermediate )	56.7803	1.75420	0.05401	0.03079
0.16667	4.03258	Pimephales promelas (Tolerant )	15.7102	1.19618	0.36905	0.30852
0.16667	.	-->AVO	.	2.41591	.	.
0.16667	.	-->GRO	.	3.05636	.	.
0.16667	.	-->LT50 -MOR	.	1.13373	3.77057	.
0.61111	5.28222	Salvelinus fontinalis (Intermediate )	60.6213	1.78263	0.19853	0.11137
0.38889	4.71778	early-Catostomus latipinnis	49.8638	1.69779	0.32031	0.18866

# Zinc SSD for Vertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 196) data for Vertebrate species exposed to zinc in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	1.90676	3.15618	0.94207	0.96699	2.02178	7	0.064577

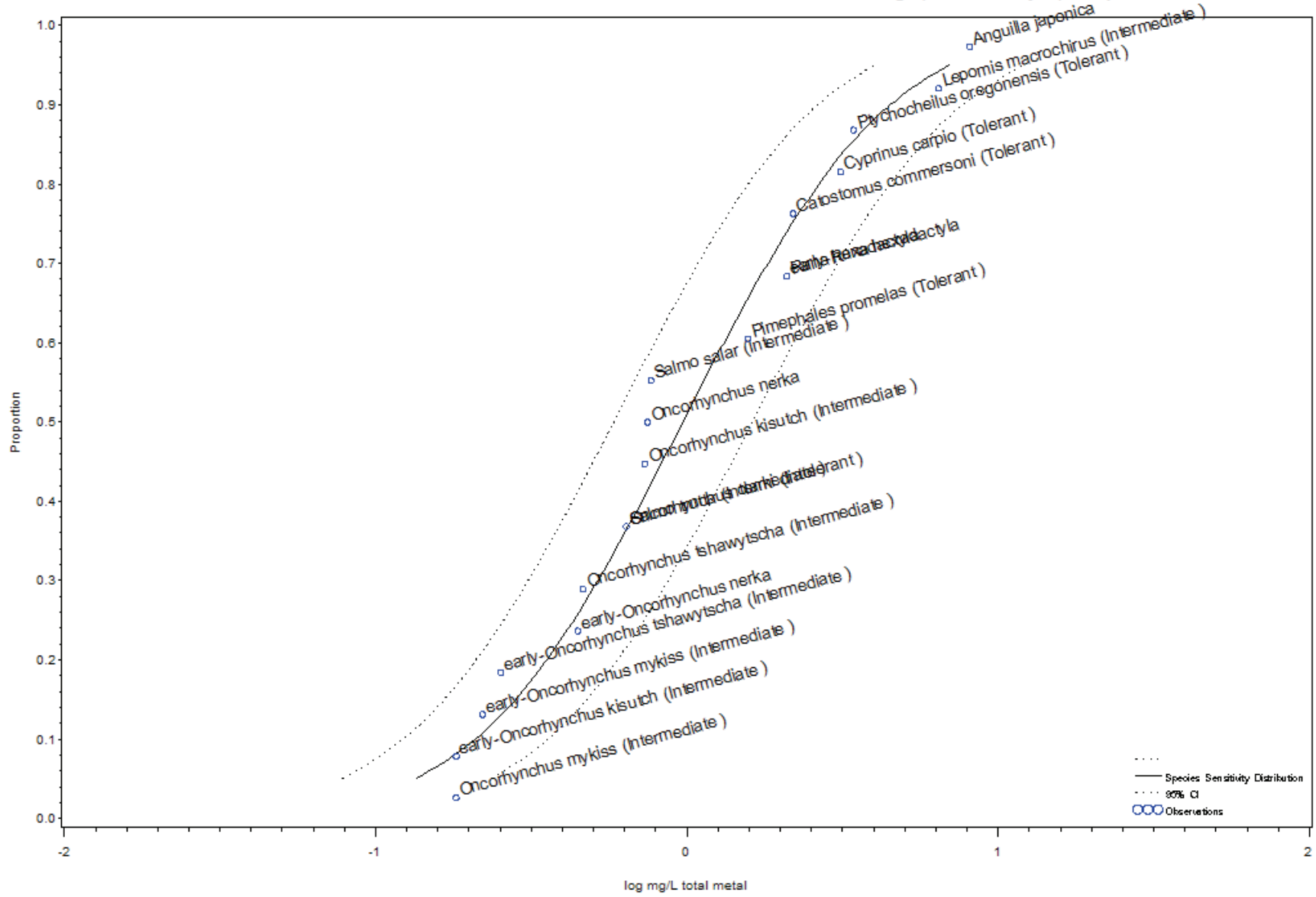
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.2716	2.579	0.6270	0.10435	0.41144	-0.20274	1.53504
0.10	3.71845	1.9719	3.860	1.0074	0.29488	0.58657	0.00319	1.44658
0.20	4.15838	3.3543	6.354	1.7707	0.52560	0.80306	0.24815	1.36645
0.25	4.32551	4.1045	7.704	2.1867	0.61326	0.88672	0.33979	1.34425
0.30	4.47560	4.9201	9.174	2.6386	0.69197	0.96257	0.42137	1.32837
0.50	5.00000	9.2681	17.106	5.0215	0.96699	1.23315	0.70084	1.30387
0.75	5.67449	20.9280	39.282	11.1496	1.32073	1.59420	1.04726	1.34425
0.90	6.28155	43.5614	85.269	22.2541	1.63910	1.93079	1.34741	1.44658
0.95	6.64485	67.5515	137.002	33.3076	1.82964	2.13673	1.52254	1.53504

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.61111	5.28222	Cirrhinus mrigala	14.6372	1.16546	0.35311	0.30298
0.61111	.	-->MATC -GRO	.	0.01186	1.62817	.
0.61111	.	-->NoTrend -MOR	.	1.16315	.	.
0.94444	6.59322	Colisa fasciata	43.4000	1.63749	.	.
0.94444	.	-->BCM	.	3.68888	.	.
0.05556	3.40678	Cyprinus carpio (Tolerant )	2.1213	0.32661	1.62707	4.98176
0.05556	.	-->BCM	.	1.79176	.	.
0.05556	.	-->ENZ	.	1.79176	0.00000	.
0.05556	.	-->PHY	.	1.79176	.	.
0.50000	5.00000	Pimephales promelas (Tolerant )	9.1090	0.95947	0.19612	0.20440
0.50000	.	-->EC50 -DVP	.	1.02188	0.81701	.
0.72222	5.58946	Xenopus laevis	26.9495	1.43055	0.03758	0.02627
0.72222	.	-->EC50 -DVP	.	1.00742	0.04647	.
0.72222	.	-->LOEC -GRO	.	0.16935	0.53054	.
0.16667	4.03258	early-Ambystoma opacum	2.3800	0.37658	.	.
0.38889	4.71778	early-Micropterus salmoides (Intermediate )	5.1600	0.71265	.	.
0.27778	4.41054	early-Pimephales promelas (Tolerant )	3.6000	0.55630	.	.
0.27778	.	-->EC50 -GRO	.	-0.36698	0.20342	.
0.27778	.	-->LOEC -GRO	.	-0.30809	0.28671	.
0.83333	5.96742	early-Xenopus laevis	34.5000	1.53782	.	.
0.83333	.	-->EC50 -GRO	.	1.28093	.	.
0.83333	.	-->LOEC -GRO	.	1.43508	.	.

### Zinc SSD for Vertebrates - in soft water at T<=15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 197) data for Vertebrate species exposed to zinc in soft water at T<=15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	GrandMean	CorrSSQ	DF	MSE
19	1.92507	5.02478	0.96243	-0.012897	4.60933	17	0.039228

Predicted Values

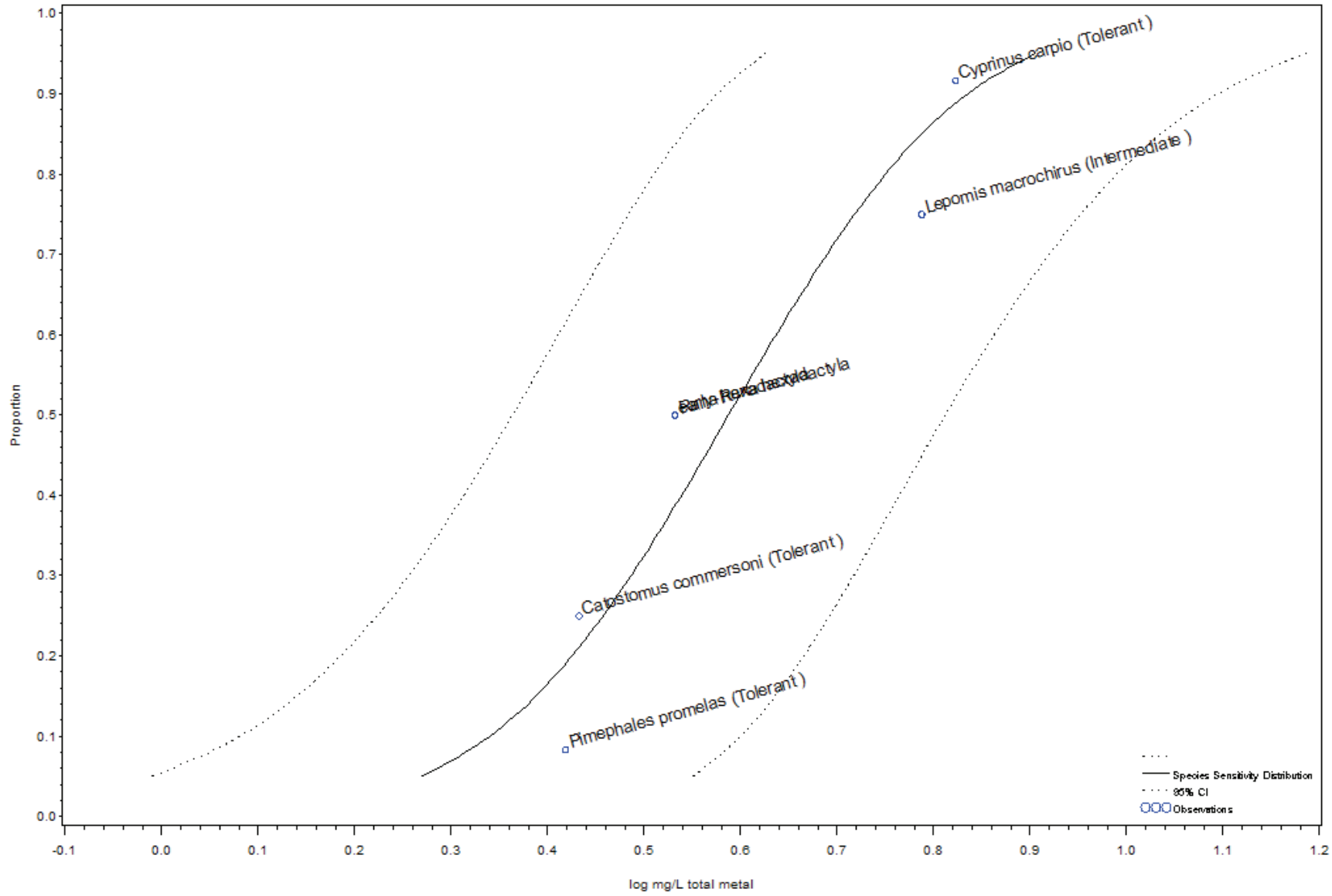
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.13573	0.2136	0.08624	-0.86731	-0.67035	-1.06427	0.93845
0.10	3.71845	0.20961	0.3260	0.13477	-0.67859	-0.48676	-0.87042	0.91243
0.20	4.15838	0.35476	0.5459	0.23053	-0.45006	-0.26285	-0.63727	0.88909
0.25	4.32551	0.43327	0.6648	0.28237	-0.36324	-0.17730	-0.54918	0.88268
0.30	4.47560	0.51847	0.7939	0.33861	-0.28528	-0.10025	-0.47031	0.87810
0.50	5.00000	0.97080	1.4817	0.63606	-0.01287	0.17076	-0.19650	0.87107
0.75	5.67449	2.17522	3.3377	1.41763	0.33750	0.52344	0.15156	0.88268
0.90	6.28155	4.49623	6.9933	2.89078	0.65285	0.84468	0.46101	0.91244
0.95	6.64485	6.94337	10.9278	4.41172	0.84157	1.03853	0.64461	0.93846

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.97368	6.93793	Anguilla japonica	8.11000	0.90902	.	.
0.76316	5.71650	Catostomus commersoni (Tolerant )	2.20000	0.34242	.	.
0.81579	5.89943	Cyprinus carpio (Tolerant )	3.12000	0.49415	.	.
0.92105	6.41219	Lepomis macrochirus (Intermediate )	6.44000	0.80889	.	.
0.92105	.	-->LC0 -MOR	.	-0.12128	0.99050	.
0.36842	4.66396	Oncorhynchus clarki (Intolerant )	0.64000	-0.19382	.	.
0.36842	.	-->NR-LETH -MOR	.	-0.17442	0.01684	.
0.44737	4.86769	Oncorhynchus kisutch (Intermediate )	0.73290	-0.13495	0.14408	1.06763
0.02632	3.06207	Oncorhynchus mykiss (Intermediate )	0.18173	-0.74058	0.28116	0.37965
0.02632	.	-->BCM	.	-2.05038	0.47459	.
0.02632	.	-->GRO	.	-2.38597	.	.
0.02632	.	-->MOR	.	-3.30116	1.18129	.
0.02632	.	-->NR-LETH -MOR	.	-0.13486	0.07280	.
0.02632	.	-->NoTrend -MOR	.	-2.38597	.	.
0.02632	.	-->PHY	.	-1.97685	0.08419	.
0.50000	5.00000	Oncorhynchus nerka	0.74900	-0.12552	.	.
0.28947	4.44508	Oncorhynchus tshawytscha (Intermediate )	0.46478	-0.33275	0.12664	0.38058
0.60526	5.26699	Pimephales promelas (Tolerant )	1.57693	0.19781	0.32818	1.65902
0.86842	6.11896	Ptychocheilus oregonensis (Tolerant )	3.43364	0.53575	0.04530	0.08455
0.68421	5.47951	Rana hexadactyla	2.10000	0.32222	.	.
0.55263	5.13231	Salmo salar (Intermediate )	0.76823	-0.11451	0.32525	2.84046
0.55263	.	-->MOR	.	-0.06614	.	.
0.36842	4.66396	Salmo trutta (Intermediate )	0.64000	-0.19382	.	.
0.36842	.	-->NoTrend -MOR	.	-1.46968	.	.
0.07895	3.58781	early-Oncorhynchus kisutch (Intermediate )	0.18200	-0.73993	.	.
0.13158	3.88104	early-Oncorhynchus mykiss (Intermediate )	0.22108	-0.65545	0.44988	0.68637
0.23684	4.28350	early-Oncorhynchus nerka	0.44700	-0.34969	.	.
0.18421	4.10057	early-Oncorhynchus tshawytscha (Intermediate )	0.25321	-0.59651	0.48118	0.80666
0.68421	5.47951	early-Rana hexadactyla	2.10000	0.32222	.	.



### Zinc SSD for Vertebrates - in soft water at T<=15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 198) data for Vertebrate species exposed to zinc in soft water at T<=15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	5.17900	1.95506	0.87344	0.58794	0.15420	4	0.14982

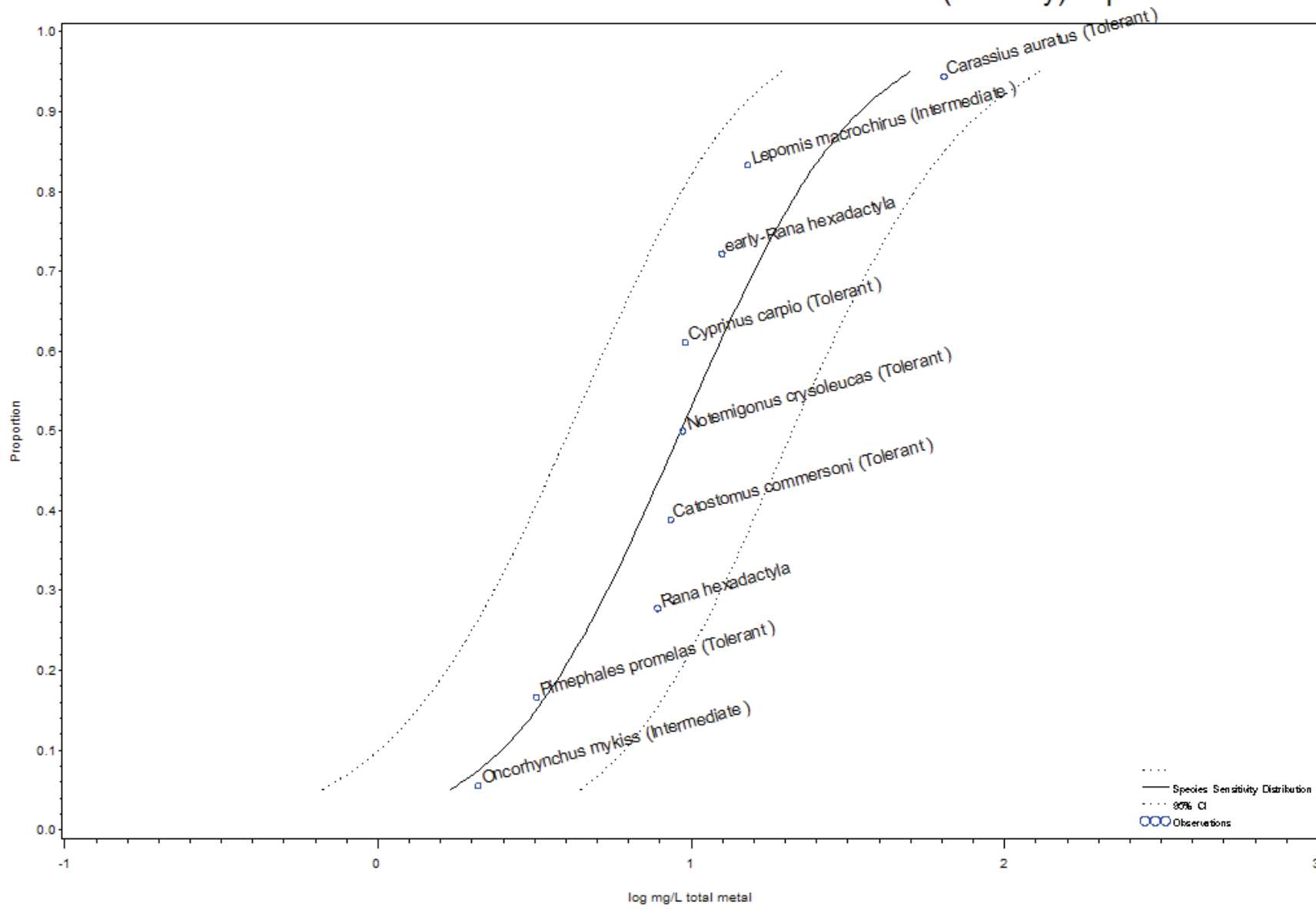
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.86355	3.0573	1.13591	0.27034	0.48534	0.05534	1.03104
0.10	3.71845	2.19023	3.4652	1.38435	0.34049	0.53973	0.14124	0.95008
0.20	4.15838	2.66339	4.0713	1.74236	0.42543	0.60973	0.24114	0.87442
0.25	4.32551	2.86883	4.3424	1.89530	0.45771	0.63773	0.27768	0.85300
0.30	4.47560	3.06680	4.6091	2.04057	0.48669	0.66362	0.30975	0.83754
0.50	5.00000	3.87205	5.7549	2.60522	0.58794	0.76004	0.41584	0.81344
0.75	5.67449	5.22608	7.9105	3.45262	0.71818	0.89820	0.53815	0.85300
0.90	6.28155	6.84530	10.8302	4.32661	0.83539	1.03464	0.63615	0.95008
0.95	6.64485	8.04529	13.1990	4.90392	0.90554	1.12054	0.69054	1.03104

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.25000	4.32551	Catostomus commersoni (Tolerant )	2.70939	0.43287	0.054334	0.12552
0.25000	.	-->LT50 -MOR	.	1.60944	.	.
0.91667	6.38299	Cyprinus carpio (Tolerant )	6.65446	0.82311	0.067583	0.08211
0.75000	5.67449	Lepomis macrochirus (Intermediate )	6.14000	0.78817	.	.
0.75000	.	-->LC100 -MOR	.	3.41707	.	.
0.08333	3.61701	Pimephales promelas (Tolerant )	2.62393	0.41895	0.017553	0.04190
0.50000	5.00000	Rana hexadactyla	3.40620	0.53227	0.044139	0.08293
0.50000	5.00000	early-Rana hexadactyla	3.40620	0.53227	0.044139	0.08293

# Zinc SSD for Vertebrates - in soft water at T<=15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 199) data for Vertebrate species exposed to zinc in soft water at T<=15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	2.24381	2.83160	0.90773	0.96639	1.40679	7	0.10285

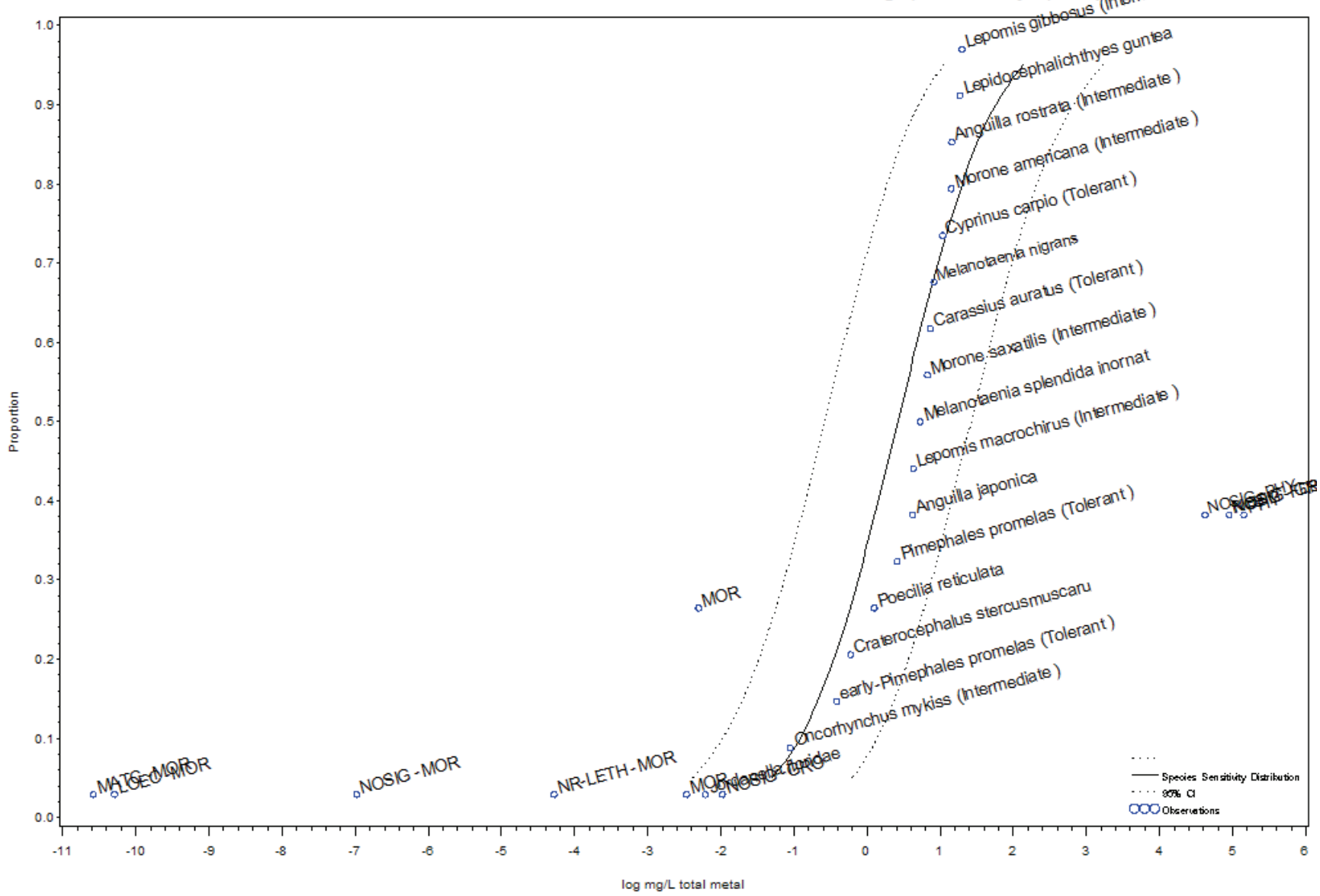
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.7113	3.666	0.7988	0.23333	0.56422	-0.09756	1.67556
0.10	3.71845	2.4845	5.118	1.2062	0.39524	0.70906	0.08143	1.57426
0.20	4.15838	3.9022	7.750	1.9647	0.59131	0.88932	0.29330	1.48265
0.25	4.32551	4.6323	9.107	2.3562	0.66579	0.95937	0.37222	1.45730
0.30	4.47560	5.4036	10.546	2.7689	0.73268	1.02307	0.44230	1.43916
0.50	5.00000	9.2554	17.858	4.7968	0.96639	1.25183	0.68095	1.41121
0.75	5.67449	18.4925	36.355	9.4063	1.26700	1.56057	0.97342	1.45730
0.90	6.28155	34.4783	71.017	16.7390	1.53755	1.85136	1.22373	1.57426
0.95	6.64485	50.0563	107.238	23.3652	1.69946	2.03035	1.36857	1.67556

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.94444	6.59322	Carassius auratus (Tolerant )	64.1872	1.80745	0.29046	0.16070
0.38889	4.71778	Catostomus commersoni (Tolerant )	8.6148	0.93524	0.26673	0.28520
0.61111	5.28222	Cyprinus carpio (Tolerant )	9.5834	0.98152	0.04391	0.04473
0.83333	5.96742	Lepomis macrochirus (Intermediate )	15.1720	1.18104	0.24640	0.20863
0.50000	5.00000	Notemigonus crysoleucas (Tolerant )	9.4055	0.97338	0.11812	0.12135
0.05556	3.40678	Oncorhynchus mykiss (Intermediate )	2.0900	0.32014	0.17963	0.56109
0.05556	.	-->BCM	.	2.02328	2.35552	.
0.05556	.	-->EC50 -AVO	.	-4.35182	0.95838	.
0.05556	.	-->HIS	.	3.68888	.	.
0.05556	.	-->LT50 -MOR	.	2.30259	.	.
0.05556	.	-->PHY	.	3.68888	.	.
0.16667	4.03258	Pimephales promelas (Tolerant )	3.2100	0.50651	.	.
0.27778	4.41054	Rana hexadactyla	7.8200	0.89321	.	.
0.72222	5.58946	early-Rana hexadactyla	12.5621	1.09906	0.29113	0.26489

# Zinc SSD for Vertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 200) data for Vertebrate species exposed to zinc in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
17	0.95829	4.59581	0.81849	0.42178	14.0615	15	0.19091

Predicted Values

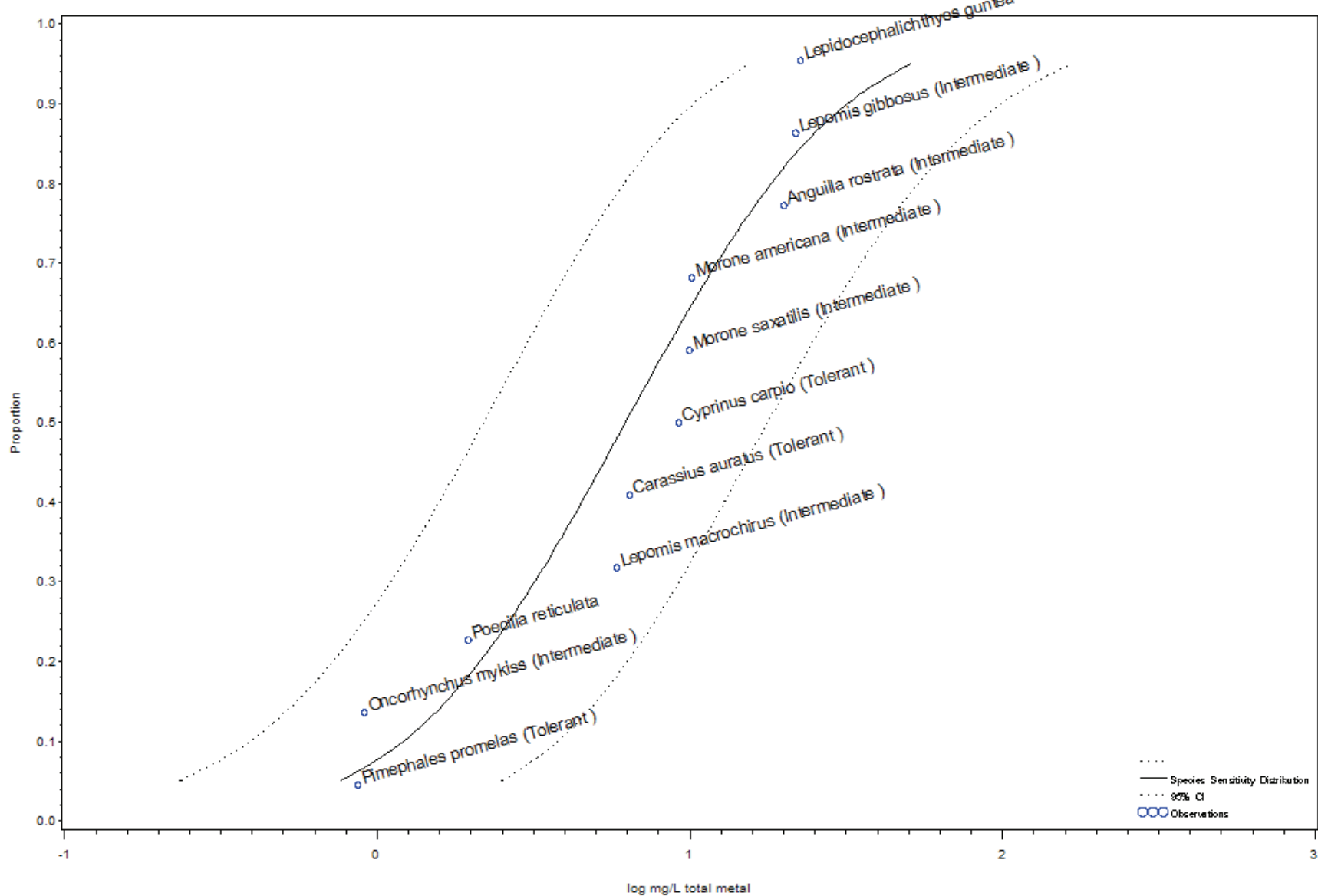
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.051	0.40	0.0064	-1.29466	-0.39447	-2.19485	7.82091
0.10	3.71845	0.121	0.90	0.0164	-0.91555	-0.04506	-1.78603	7.28658
0.20	4.15838	0.350	2.44	0.0501	-0.45647	0.38705	-1.29999	6.83122
0.25	4.32551	0.522	3.58	0.0762	-0.28206	0.55399	-1.11812	6.70988
0.30	4.47560	0.749	5.07	0.1106	-0.12544	0.70527	-0.95615	6.62428
0.50	5.00000	2.641	17.55	0.3975	0.42178	1.24427	-0.40070	6.49433
0.75	5.67449	13.355	91.56	1.9479	1.12563	1.96168	0.28957	6.70988
0.90	6.28155	57.427	426.18	7.7381	1.75911	2.62960	0.88863	7.28658
0.95	6.64485	137.476	1092.49	17.2997	2.13823	3.03842	1.23804	7.82091

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.38235	4.70069	Anguilla japonica	4.2266	0.6260	0.25291	0.40401
0.38235	.	-->NOSIG -FDB	.	4.9558	.	.
0.38235	.	-->NOSIG -GRO	.	4.9558	.	.
0.38235	.	-->NOSIG -PHY	.	4.6250	.	.
0.38235	.	-->PHY	.	5.1562	.	.
0.85294	6.04913	Anguilla rostrata (Intermediate )	14.5499	1.1629	0.00211	0.00182
0.61765	5.29931	Carassius auratus (Tolerant )	7.3875	0.8685	0.12759	0.14691
0.61765	.	-->BEH	.	1.7228	.	.
0.20588	4.17921	Craterocephalus stercusmuscaru	0.6000	-0.2218	.	.
0.73529	5.62890	Cyprinus carpio (Tolerant )	10.9195	1.0382	0.25306	0.24375
0.02941	3.11049	Jordanella floridae	0.0062	-2.2087	3.37258	1.52696
0.02941	.	-->LOEC -MOR	.	-10.2892	.	.
0.02941	.	-->MATC -MOR	.	-10.5768	.	.
0.02941	.	-->MOR	.	-2.4651	.	.

0.02941	.	-->NOSIG -GRO	.	-1.9733	.	.
0.02941	.	-->NOSIG -MOR	.	-6.9791	5.66136	.
0.02941	.	-->NR-LETH -MOR	.	-4.2759	.	.
0.91176	6.35170	Lepidocephalichthyes guntea	18.6949	1.2717	0.13524	0.10635
0.97059	6.88951	Lepomis gibbosus (Intermediate )	20.0499	1.3021	0.00153	0.00118
0.44118	4.85201	Lepomis macrochirus (Intermediate )	4.3314	0.6366	0.12033	0.18902
0.44118	.	-->BEH	.	1.0784	.	.
0.44118	.	-->LC0 -MOR	.	-0.2261	0.80897	.
0.44118	.	-->PHY	.	1.4255	.	.
0.67647	5.45785	Melanotaenia nigrans	8.2681	0.9174	0.19736	0.21513
0.50000	5.00000	Melanotaenia splendida inornat	5.4221	0.7342	0.06487	0.08836
0.79412	5.82079	Morone americana (Intermediate )	14.3499	1.1568	0.00214	0.00185
0.55882	5.14799	Morone saxatilis (Intermediate )	6.7498	0.8293	0.00455	0.00549
0.08824	3.64830	Oncorhynchus mykiss (Intermediate )	0.0890	-1.0505	0.22515	0.21433
0.08824	.	-->BCM	.	-2.3914	.	.
0.08824	.	-->GRO	.	-2.3914	.	.
0.08824	.	-->MOR	.	-3.0997	1.30451	.
0.08824	.	-->NoTrend -BCM	.	-2.3914	.	.
0.08824	.	-->NoTrend -BEH	.	-2.3914	.	.
0.08824	.	-->PHY	.	-2.1752	0.30577	.
0.32353	4.54215	Pimephales promelas (Tolerant )	2.6066	0.4161	0.53520	1.28632
0.32353	.	-->LT50 -MOR	.	-4.6052	.	.
0.32353	.	-->MOR	.	-3.4539	1.62817	.
0.26471	4.37110	Poecilia reticulata	1.2700	0.1038	.	.
0.26471	.	-->MOR	.	-2.3026	.	.
0.14706	3.95087	early-Pimephales promelas (Tolerant )	0.3870	-0.4123	0.22019	0.53407

# Zinc SSD for Vertebrates - in soft water at T>15C over moderate (1-3 days) exposure





Species Sensitivity Distribution (SSD 201) data for Vertebrate species exposed to zinc in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	1.80660	3.56511	0.88902	0.79425	2.66768	9	0.12077

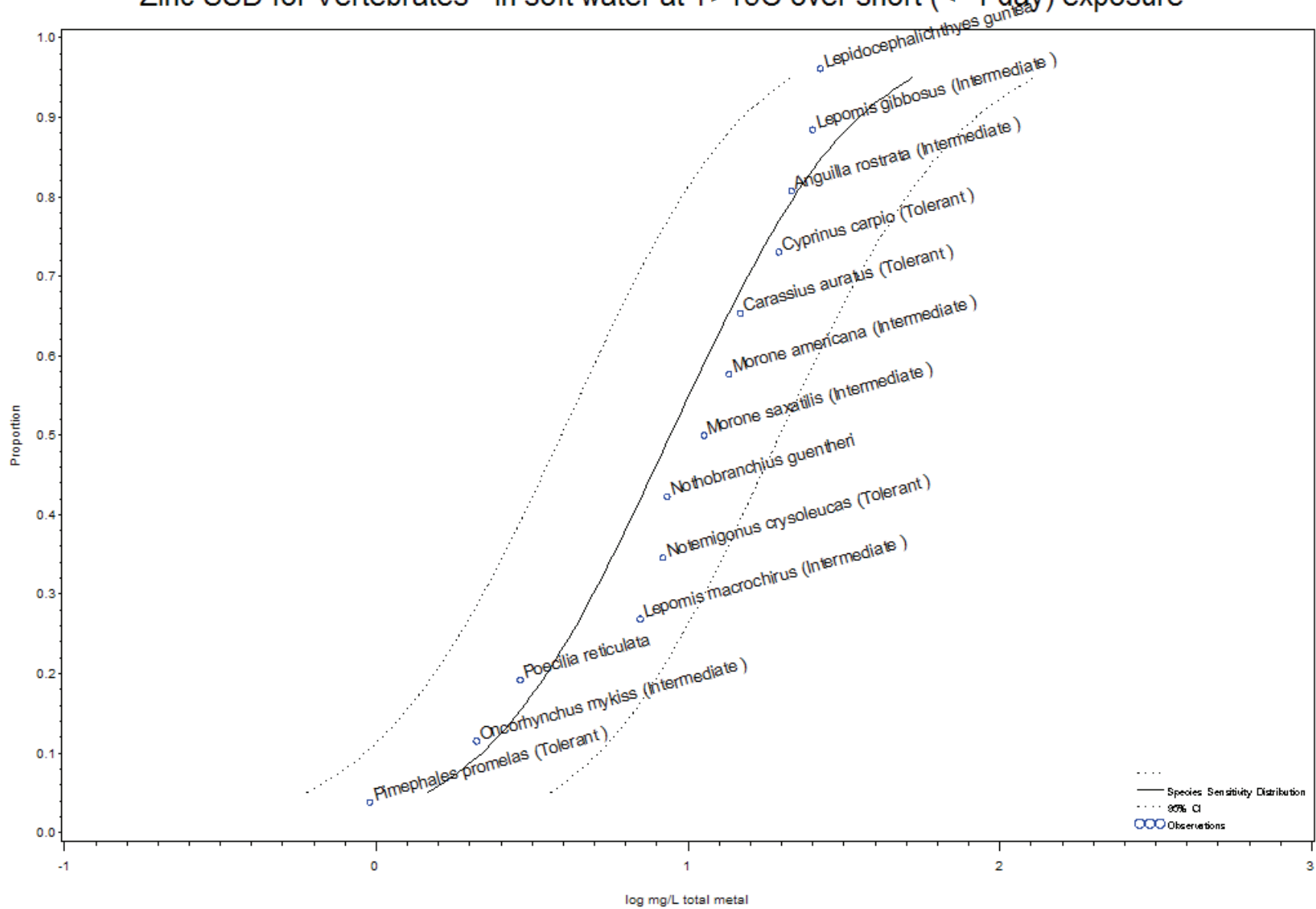
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.7652	2.001	0.2926	-0.11622	0.30125	-0.53369	2.23261
0.10	3.71845	1.2158	3.046	0.4853	0.08488	0.48375	-0.31400	2.10625
0.20	4.15838	2.1301	5.131	0.8843	0.32839	0.71018	-0.05340	1.99357
0.25	4.32551	2.6357	6.279	1.1063	0.42090	0.79792	0.04388	1.96268
0.30	4.47560	3.1914	7.544	1.3502	0.50398	0.87758	0.13039	1.94065
0.50	5.00000	6.2266	14.540	2.6665	0.79425	1.16255	0.42595	1.90683
0.75	5.67449	14.7095	35.044	6.1742	1.16760	1.54462	0.79058	1.96268
0.90	6.28155	31.8878	79.891	12.7277	1.50362	1.90250	1.10475	2.10625
0.95	6.64485	50.6666	132.494	19.3753	1.70472	2.12220	1.28725	2.23261

Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.77273	5.74786	Anguilla rostrata (Intermediate )	20.0499	1.30211	0.00153	0.00118
0.40909	4.77012	Carassius auratus (Tolerant )	6.4400	0.80889	.	.
0.40909	.	-->BEH	.	2.01490	.	.
0.50000	5.00000	Cyprinus carpio (Tolerant )	9.2499	0.96614	0.00332	0.00344
0.95455	6.69062	Lepidocephalichthyes guntea	22.6587	1.35523	0.07680	0.05667
0.86364	6.09680	Lepomis gibbosus (Intermediate )	21.8499	1.33945	0.00141	0.00105
0.31818	4.52721	Lepomis macrochirus (Intermediate )	5.8556	0.76757	0.06563	0.08551
0.31818	.	-->MOR	.	2.16332	.	.
0.31818	.	-->PHY	.	0.55962	.	.
0.68182	5.47279	Morone americana (Intermediate )	10.1499	1.00646	0.00303	0.00301
0.59091	5.22988	Morone saxatilis (Intermediate )	10.0000	1.00000	0.00000	0.00000
0.13636	3.90320	Oncorhynchus mykiss (Intermediate )	0.9100	-0.04096	.	.
0.13636	.	-->LT50 -MOR	.	0.00000	.	.
0.04545	3.30938	Pimephales promelas (Tolerant )	0.8702	-0.06038	0.04528	0.74995
0.04545	.	-->LT50 -MOR	.	0.00000	1.88005	.
0.22727	4.25214	Poecilia reticulata	1.9600	0.29226	.	.

# Zinc SSD for Vertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 202) data for Vertebrate species exposed to zinc in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
13	2.11860	3.00064	0.90153	0.94372	2.36743	11	0.10551

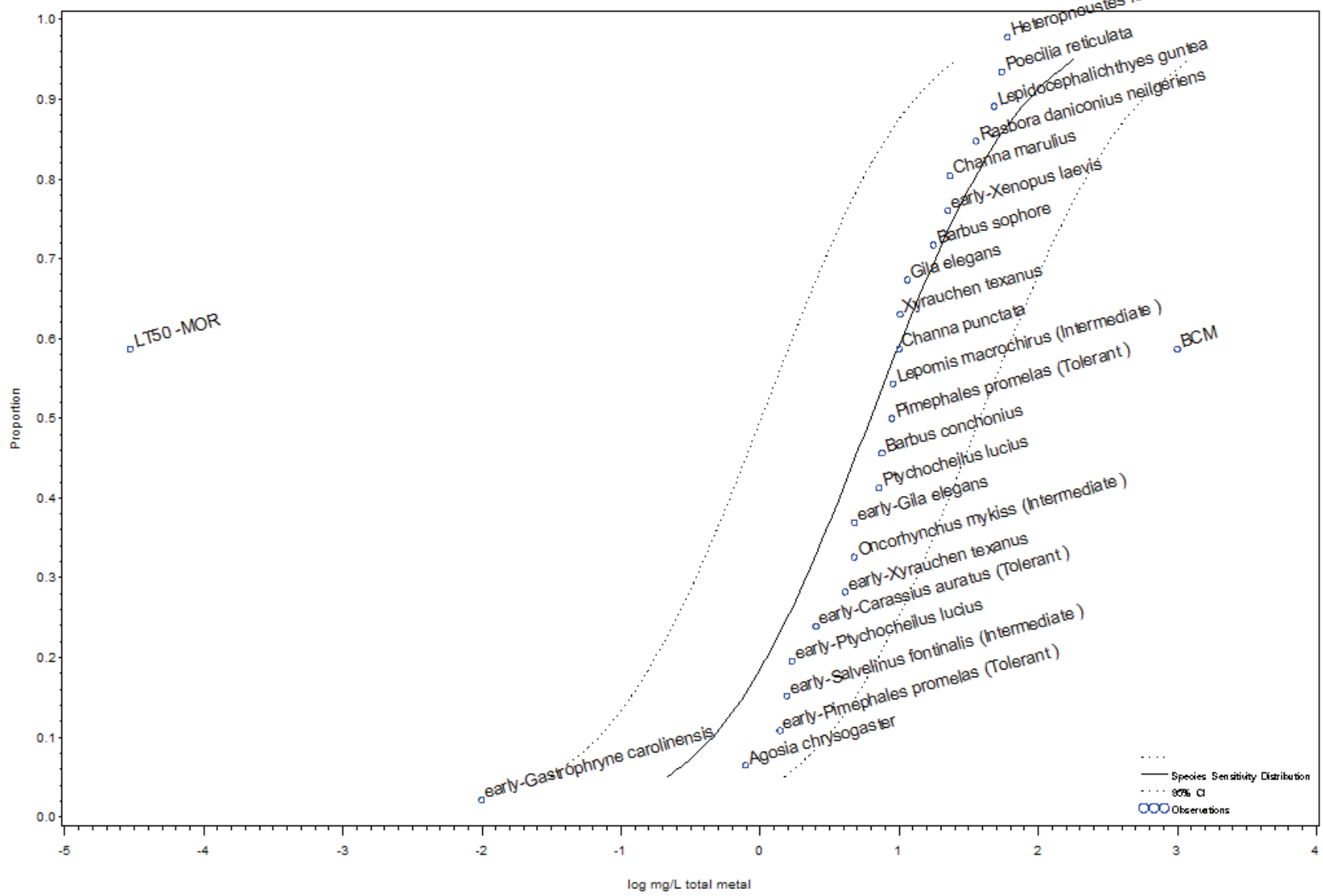
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.4700	3.055	0.7073	0.16733	0.48506	-0.15040	1.59726
0.10	3.71845	2.1818	4.409	1.0796	0.33881	0.64437	0.03325	1.52616
0.20	4.15838	3.5193	6.933	1.7865	0.54646	0.84091	0.25201	1.46231
0.25	4.32551	4.2204	8.255	2.1577	0.62535	0.91672	0.33398	1.44474
0.30	4.47560	4.9681	9.668	2.5529	0.69619	0.98535	0.40704	1.43219
0.50	5.00000	8.7845	16.961	4.5496	0.94372	1.22946	0.65797	1.41291
0.75	5.67449	18.2844	35.764	9.3479	1.26208	1.55345	0.97071	1.44474
0.90	6.28155	35.3688	71.479	17.5009	1.54862	1.85418	1.24306	1.52616
0.95	6.64485	52.4930	109.102	25.2564	1.72010	2.03783	1.40237	1.59726

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.80769	5.86942	Anguilla rostrata (Intermediate )	21.4998	1.33243	0.00286	0.00214
0.65385	5.39573	Carassius auratus (Tolerant )	14.7540	1.16891	0.29883	0.25565
0.73077	5.61514	Cyprinus carpio (Tolerant )	19.5704	1.29160	0.23340	0.18071
0.96154	6.76883	Lepidocephalichthyes guntea	26.6381	1.42550	0.12593	0.08834
0.88462	6.19838	Lepomis gibbosus (Intermediate )	25.1500	1.40054	0.00122	0.00087
0.26923	4.38486	Lepomis macrochirus (Intermediate )	7.0393	0.84753	0.06730	0.07940
0.26923	.	-->BEH	.	2.30259	.	.
0.26923	.	-->LC100 -MOR	.	2.87639	.	.
0.57692	5.19403	Morone americana (Intermediate )	13.5499	1.13194	0.00227	0.00200
0.50000	5.00000	Morone saxatilis (Intermediate )	11.2499	1.05115	0.00273	0.00260
0.34615	4.60427	Notemigonus crysoleucas (Tolerant )	8.3300	0.92065	.	.
0.42308	4.80597	Nothobranchius guentheri	8.5817	0.93357	0.13203	0.14143
0.11538	3.80162	Oncorhynchus mykiss (Intermediate )	2.1000	0.32222	.	.
0.11538	.	-->EC50 -AVO	.	-5.44914	.	.
0.11538	.	-->LT50 -MOR	.	2.30259	.	.
0.03846	3.23117	Pimephales promelas (Tolerant )	0.9547	-0.02014	0.03424	1.70045
0.03846	.	-->LT50 -MOR	.	2.30259	.	.
0.19231	4.13058	Poecilia reticulata	2.9000	0.46240	.	.

### Zinc SSD for Vertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 203) data for Vertebrate species exposed to zinc in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
23	1.12821	4.10328	0.83183	0.79482	14.2249	21	0.17431

Predicted Values

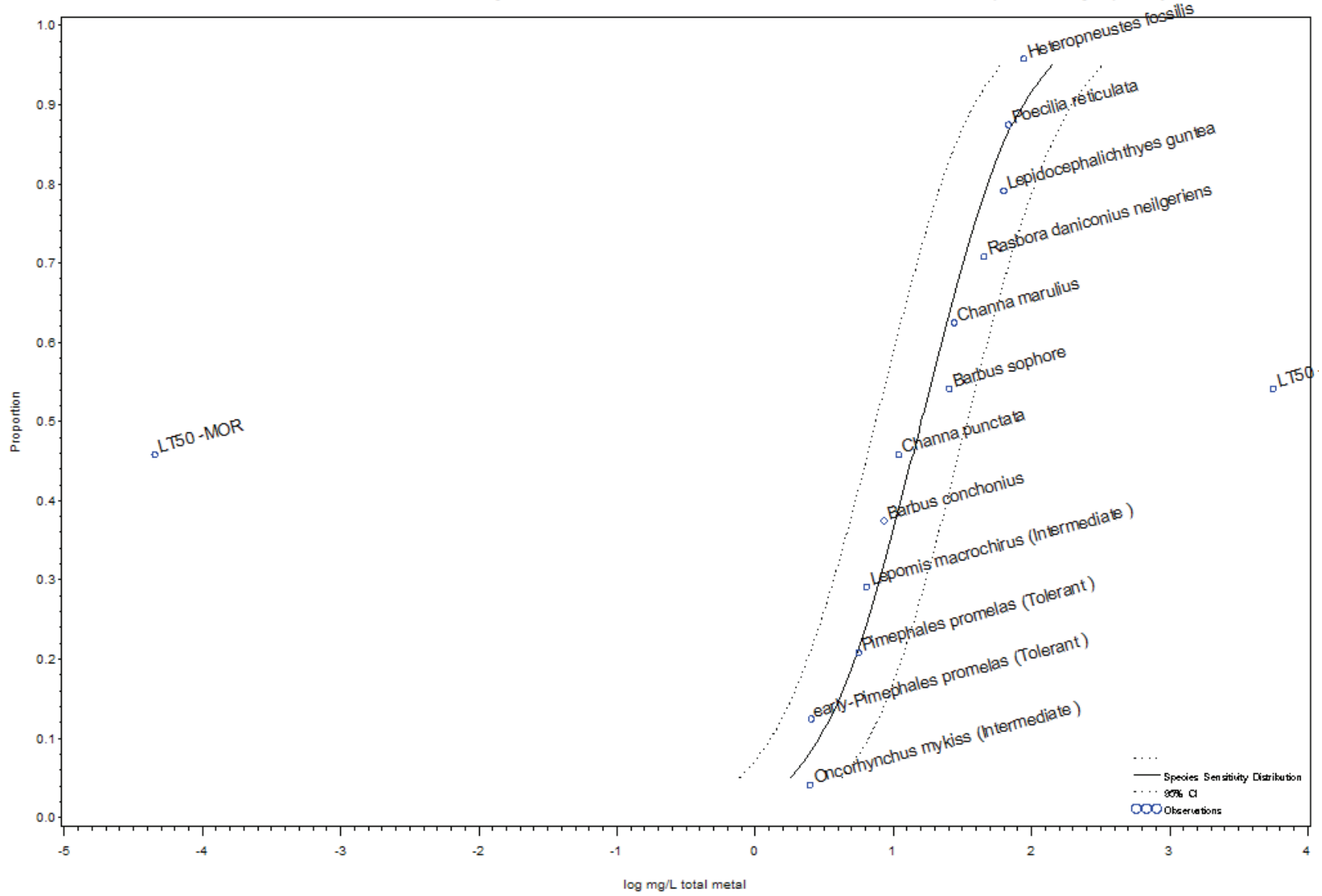
Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.217	1.077	0.0438	-0.66311	0.03237	-1.35860	4.75840
0.10	3.71845	0.456	2.173	0.0957	-0.34110	0.33705	-1.01925	4.55613
0.20	4.15838	1.119	5.145	0.2434	0.04884	0.71139	-0.61371	4.38028
0.25	4.32551	1.574	7.165	0.3457	0.19698	0.85523	-0.46127	4.33286
0.30	4.47560	2.138	9.665	0.4730	0.33001	0.98520	-0.32517	4.29925
0.50	5.00000	6.235	27.880	1.3943	0.79482	1.44529	0.14435	4.24801
0.75	5.67449	24.698	112.438	5.4252	1.39266	2.05091	0.73441	4.33286
0.90	6.28155	85.259	406.340	17.8892	1.93074	2.60889	1.25259	4.55613
0.95	6.64485	178.960	887.646	36.0807	2.25276	2.94824	1.55727	4.75840

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.06522	3.48761	Agosia chrysogaster	0.7900	-0.10237	.	.
0.45652	4.89080	Barbus conchoniis	7.5610	0.87858	.	.
0.71739	5.57511	Barbus sophore	17.6748	1.24736	0.34981	0.28044
0.80435	5.85725	Channa marulius	23.2404	1.36624	0.05963	0.04365
0.58696	5.21972	Channa punctata	10.0594	1.00257	1.11591	1.11305
0.58696	.	-->BCM	.	3.00151	0.19378	.
0.58696	.	-->LT50 -MOR	.	-4.52821	.	.
0.67391	5.45074	Gila elegans	11.5499	1.06258	0.42306	0.39815
0.97826	7.01909	Heteropneustes fossilis	60.3000	1.78032	.	.
0.89130	6.23349	Lepidocephalichthyes guntea	48.3000	1.68395	.	.
0.54348	5.10920	Lepomis macrochirus (Intermediate )	9.0616	0.95720	0.10655	0.11131
0.32609	4.54926	Oncorhynchus mykiss (Intermediate )	4.7600	0.67761	.	.
0.32609	.	-->LT50 -MOR	.	1.25276	0.00000	.
0.50000	5.00000	Pimephales promelas (Tolerant )	8.8741	0.94812	0.45012	0.47475
0.93478	6.51239	Poecilia reticulata	54.9500	1.73997	.	.
0.41304	4.78028	Ptychocheilus lucius	7.1833	0.85632	0.31517	0.36805
0.84783	6.02715	Rasbora daniconius neilgeriens	35.8100	1.55400	.	.
0.63043	5.33301	Xyrauchen texanus	10.1980	1.00852	0.27662	0.27429
0.23913	4.29090	early-Carassius auratus (Tolerant )	2.5400	0.40483	.	.
0.02174	2.98091	early-Gastrophryne carolinensis	0.0100	-2.00000	.	.
0.36957	4.66699	early-Gila elegans	4.8000	0.68124	.	.
0.10870	3.76651	early-Pimephales promelas (Tolerant )	1.3944	0.14440	0.23722	1.64283
0.10870	.	-->GRO	.	-5.29832	.	.
0.10870	.	-->MOR	.	-1.77013	3.06727	.
0.10870	.	-->NR-LETH -MOR	.	1.02962	.	.
0.19565	4.14275	early-Ptychocheilus lucius	1.7000	0.23045	.	.
0.15217	3.97285	early-Salvelinus fontinalis (Intermediate )	1.5633	0.19404	0.00321	0.01657
0.76087	5.70910	early-Xenopus laevis	22.5000	1.35218	.	.
0.28261	4.42489	early-Xyrauchen texanus	4.1000	0.61278	.	.



# Zinc SSD for Vertebrates - in very hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 204) data for Vertebrate species exposed to zinc in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	1.74111	2.90600	0.94317	1.20269	3.35708	10	0.061323

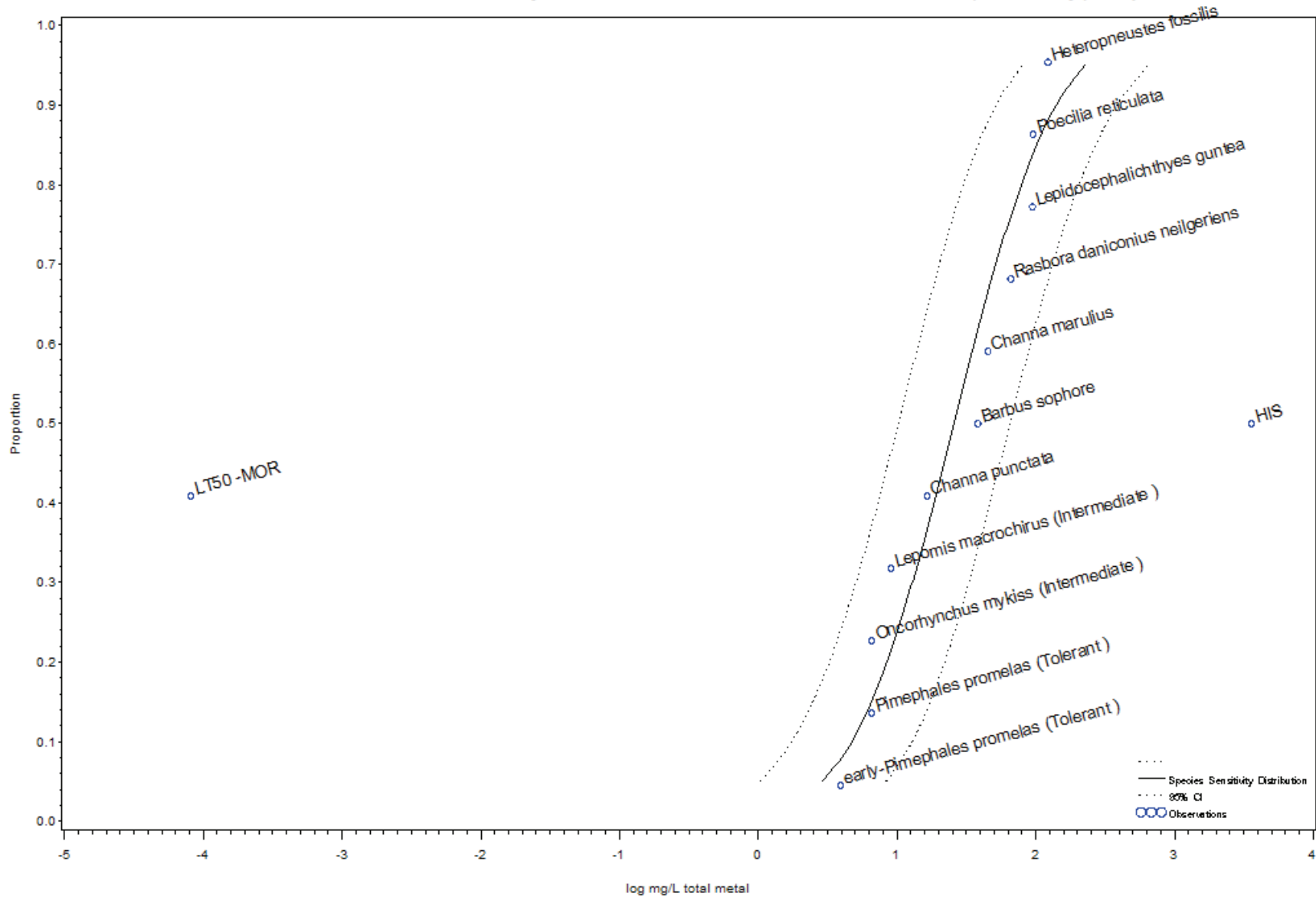
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.811	3.609	0.9090	0.25797	0.55740	-0.04146	1.49078
0.10	3.71845	2.928	5.678	1.5102	0.46663	0.75423	0.17903	1.42340
0.20	4.15838	5.240	9.911	2.7702	0.71930	0.99610	0.44251	1.36275
0.25	4.32551	6.536	12.277	3.4794	0.81529	1.08908	0.54150	1.34604
0.30	4.47560	7.971	14.898	4.2644	0.90150	1.17313	0.62986	1.33410
0.50	5.00000	15.947	29.580	8.5976	1.20269	1.47100	0.93438	1.31573
0.75	5.67449	38.911	73.092	20.7152	1.59008	1.86387	1.31629	1.34604
0.90	6.28155	86.844	168.401	44.7859	1.93874	2.22634	1.65114	1.42340
0.95	6.64485	140.412	279.789	70.4655	2.14740	2.44683	1.84798	1.49078

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.37500	4.68136	Barbus conchonius	8.6050	0.93475	0.02654	0.02840
0.54167	5.10463	Barbus sophore	25.4476	1.40565	0.24864	0.17689
0.54167	.	-->LT50 -MOR	.	3.75137	0.19863	.
0.62500	5.31864	Channa marulius	27.8400	1.44467	.	.
0.45833	4.89537	Channa punctata	11.0008	1.04142	1.08580	1.04261
0.45833	.	-->LT50 -MOR	.	-4.34281	.	.
0.95833	6.73166	Heteropneustes fossilis	88.7048	1.94795	0.06806	0.03494
0.79167	5.81222	Lepidocephalichthyes guntea	63.1664	1.80049	0.06309	0.03504
0.29167	4.45148	Lepomis macrochirus (Intermediate )	6.4400	0.80889	.	.
0.04167	3.26834	Oncorhynchus mykiss (Intermediate )	2.5043	0.39869	0.27732	0.69560
0.04167	.	-->LT50 -MOR	.	1.20441	0.13944	.
0.20833	4.18778	Pimephales promelas (Tolerant )	5.6329	0.75074	1.09320	1.45618
0.87500	6.15035	Poecilia reticulata	68.3791	1.83492	0.05308	0.02893
0.70833	5.54852	Rasbora daniconius neilgeriens	45.4729	1.65775	0.06135	0.03701
0.12500	3.84965	early-Pimephales promelas (Tolerant )	2.5487	0.40633	0.01927	0.04744

### Zinc SSD for Vertebrates - in very hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 205) data for Vertebrate species exposed to zinc in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	1.73906	2.54564	0.91955	1.41131	2.97776	9	0.087549

Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	2.921	6.814	1.2520	0.46549	0.83337	0.09760	1.90419
0.10	3.71845	4.725	10.625	2.1012	0.67439	1.02633	0.32246	1.80401
0.20	4.15838	8.460	18.393	3.8911	0.92736	1.26466	0.59007	1.71424
0.25	4.32551	10.555	22.734	4.9006	1.02347	1.35668	0.69025	1.68955
0.30	4.47560	12.876	27.546	6.0185	1.10977	1.44006	0.77949	1.67193
0.50	5.00000	25.782	54.585	12.1775	1.41131	1.73707	1.08556	1.64485
0.75	5.67449	62.974	135.636	29.2379	1.79916	2.13237	1.46595	1.68955
0.90	6.28155	140.681	316.350	62.5606	2.14823	2.50017	1.79630	1.80401
0.95	6.64485	227.584	530.919	97.5560	2.35714	2.72503	1.98925	1.90419

## Data Summary

Proportion Species	PROBIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.50000	5.00000	Barbus sophore	38.547	1.58599	0.36202	0.22826
0.50000	.	-->HIS	.	3.55535	.	.
0.59091	5.22988	Channa marulius	45.657	1.65951	0.06713	0.04045
0.40909	4.77012	Channa punctata	16.504	1.21759	1.11511	0.91584
0.40909	.	-->LT50 -MOR	.	-4.09012	0.22180	.
0.95455	6.69062	Heteropneustes fossilis	123.000	2.08991	.	.
0.77273	5.74786	Lepidocephalichthyes guntea	95.000	1.97772	.	.
0.31818	4.52721	Lepomis macrochirus (Intermediate )	9.070	0.95761	.	.
0.22727	4.25214	Oncorhynchus mykiss (Intermediate )	6.593	0.81905	0.09820	0.11990
0.22727	.	-->BCM	.	2.64547	.	.
0.22727	.	-->LT50 -MOR	.	2.18960	0.79969	.
0.13636	3.90320	Pimephales promelas (Tolerant )	6.568	0.81741	0.64063	0.78373
0.13636	.	-->LOEC -AVO	.	-1.58475	.	.
0.13636	.	-->NOEC -AVO	.	-2.56395	.	.
0.86364	6.09680	Poecilia reticulata	96.010	1.98232	0.04850	0.02447
0.68182	5.47279	Rasbora daniconius neilgeriens	66.185	1.82076	0.14332	0.07872
0.04545	3.30938	early-Pimephales promelas (Tolerant )	3.950	0.59658	0.00466	0.00782